

SEQUENCE LISTING

<110> Stefano Colloca
 Alfredo Nicosio
 Elisabetta Sporeno
 Agostino Cirillo
 Bruno Bruni Ercole
 Annalisa Meola

<120> CHIMPANZEE ADENOVIRUS VACCINE CARRIERS

<130> ITR0048YP

<150> 60/538,799

<151> 2004-01-23

<150> PCT/EP2005/000558

<151> 2004-01-18

<160> 125

<170> FastSEQ for Windows Version 4.0

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<211> 37741

<212> DNA

<213> Chimpanzee Adenovirus- ChAd3 Genomic

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<210> 6

<211> 1737

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 20 Fiber

<400> 6

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<210> 7

<211> 1278

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 4 Fiber

<400> 7

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<210> 8

<211> 1335

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 5 Fiber

<400> 8

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<210> 9

<211> 1338

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 7 Fiber

<400> 9

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gagaagcccc	tgggggtgct	gtccctgcga	ctggccgacc	ccgtcaccac	caagaacggg	180
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<210> 10

<211> 1278

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 9 Fiber

<400> 10

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gagaagcccc	tgggggtggt	gtccctgcga	ctggccgacc	ccgtcaccac	caagaacggg	180
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aacacggcca	ccaaggccgc	tgccccctctc	agttttttcca	acaacacccat	ttcccttaac	300
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acctggacta	atggaagcta	tgttggagca	acatttggag	ctaactctta	taccttctcc	1260
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<210> 11

<211> 1278

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 10 Fiber

<400> 11

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gagaagcccc	tgggggtgct	gtccctgcga	ctggccgacc	ccgtcaccac	caagaacggg	180
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<210> 12

<211> 1737

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 11 Fiber

<400> 12

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<210> 13

<211> 1632

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 16 Fiber

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<210> 14

<211> 1632

<212> DNA

<213> Chimpanzee Adenovirus-ChAd 17 Fiber

<400> 14

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<210> 15

<211> 1632

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 19 Fiber

<400> 15

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 <211> 2865
 <212> DNA
 <213> Chimp0anzee Adenovirus- ChAd 20 Hexon

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<211> 2823

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 4 Hexon

<400> 17

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<211> 2823

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 5 Hexon

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<210> 19

<211> 2823

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 7 Hexon

<400> 19

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<211> 2793

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 9 Hexon

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<210> 21

<211> 2793

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 10 Hexon

<400> 21

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<211> 2883

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 11 Hexon

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<211> 2835

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 16 Hexon

<400> 23

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<211> 2883

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 17 Hexon

<400> 24

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<211> 2877

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<213> Chimpanzee Adenovirus- ChAd 19 Hexon

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<400> 38	

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39

<210> 39

<211> 37

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<213> Artificial Sequence

<220>

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<400> 39

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37

<210> 40

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligomer

<400> 40

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45

<210> 41

<211> 2880

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 3 Hexon

<400> 41

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ctgagtaaca agtttaggaa cccacagggt gcgcccacgc acgatgtgac caccgaccgg 180
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cccacccttc	tctatgttct	gttcgaagtc	tttgacgtgg	tcggggtcca	ccagccgcac	2820
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<210> 42

<211> 1683

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 3 Fiber

<400> 42

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tcggccccgc	tgacggccgc	tgacagcagc	accctcaccg	ttagcgccac	accaccaatt	600
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gatcagaatg	gagtgttat	ggaaaactcc	tcgctagaca	ggcagttactg	gaacttcaga	1380
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gcagcatacc ccaaaacgca aagccagact gctaaaaaca acattgtaag tcagggtttac 1500
ttgaatggag acaaatccaa acccatgacc cttaccatca ccctcaatgg aactaatgaa 1560
tccagtgaag ctagccagggt gagtcactac tccatgtcat ttacatgggc ttgggaaagt 1620
gggcaatatg ccaactgaaac ctttgccacc aactccttca ctttttctta cattgctgaa 1680
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<210> 43
<211> 2859
<212> DNA
<213> Chimpanzee Adenovirus- ChAd 6 Hexon

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gctcccaagg gagcgcccaa cacctcacag tggataacca aagacaatgg aactgataag 480
acatacagtt ttggaaatgc tccagtcaga ggattggaca ttacagaaga gggctctcaa 540
ataggaccgc atgagtcagg gggtgaaagc aagaaaattt ttgcagacaa aacctatcag 600
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accagaaaa agttcctctg cgaccggggtc atgtggcgca tccccttctc cagcaacttc 2640
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<210> 44
<211> 1335
<212> DNA
<213> Chimpanzee Adenovirus- ChAd 6 Fiber

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<400> 44
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aagatattag acacagatct actaaaaaca cttgttgttg cttatgggca gggattagga 420
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attaattgca aaagaggtat ctatgtcact accacaaaag atgcactgga gattaatata 600
agttgggcaa atgctatgac atttatagga aatgccattg gtgtcaatat tgacacaaaa 660
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<210> 45
<211> 22
<212> DNA
<213> Artificial Sequence

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<220>
<223> Primer

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<400> 45
tgtcctacca rctcttgctt ga 22

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<210> 46
<211> 18
<212> DNA
<213> Artificial Sequence

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<220>
<223> Primer

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<400> 46
gtggaarggc acgtagcg

18

<210> 47
<211> 9
<212> PRT
<213> HIV gag CD8 Epitope

<220>
<223> Primer

<400> 47
Ala Met Gln Met Leu Lys Glu Thr Ile
1 5

<210> 48
<211> 578
<212> PRT
<213> Chimpanzee Adenovirus- ChAd 20 Fiber

<400> 48
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Tyr Asp Thr Glu Ser Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30
Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45
Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60
Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80
Gln Asp Ile Thr Thr Ala Ser Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95
Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val Ser Thr Ser Gly Ala
100 105 110
Leu Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115 120 125
Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
130 135 140
Leu Ala Thr Lys Gly Pro Leu Thr Val Ser Glu Gly Lys Leu Ala Leu
145 150 155 160
Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
165 170 175
Ser Ala Thr Pro Pro Leu Ser Thr Ser Asn Gly Ser Leu Gly Ile Asp
180 185 190
Met Gln Ala Pro Ile Tyr Thr Thr Asn Gly Lys Leu Gly Leu Asn Phe
195 200 205
Gly Ala Pro Leu His Val Val Asp Ser Leu Asn Ala Leu Thr Val Val
210 215 220
Thr Gly Gln Gly Leu Thr Ile Asn Gly Thr Ala Leu Gln Thr Arg Val
225 230 235 240
Ser Gly Ala Leu Asn Tyr Asp Thr Ser Gly Asn Leu Glu Leu Arg Ala
245 250 255
Ala Gly Gly Met Arg Val Asp Ala Asn Gly Gln Leu Ile Leu Asp Val

Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Glu	Ile	Thr	Leu
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Lys	Leu	Gly	Glu	Gly	Val	Asp	Leu	Asp	Ser	Ser	Gly	Lys	Leu	Ile	Ser
65					70					75					80
Asn	Thr	Ala	Thr	Lys	Ala	Ala	Ala	Pro	Leu	Ser	Phe	Ser	Asn	Asn	Thr
				85					90					95	
Ile	Ser	Leu	Asn	Met	Asp	His	Pro	Phe	Tyr	Thr	Lys	Asp	Gly	Lys	Leu
			100					105					110		
Ser	Leu	Gln	Val	Ser	Pro	Pro	Leu	Asn	Ile	Leu	Arg	Thr	Ser	Ile	Leu
		115					120					125			
Asn	Thr	Leu	Ala	Leu	Gly	Phe	Gly	Ser	Gly	Leu	Gly	Leu	Arg	Gly	Ser
		130				135					140				
Ala	Leu	Ala	Val	Gln	Leu	Val	Ser	Pro	Leu	Thr	Phe	Asp	Thr	Asp	Gly
145					150					155					160
Asn	Ile	Lys	Leu	Thr	Leu	Asp	Arg	Gly	Leu	His	Val	Thr	Thr	Gly	Asp
				165				170						175	
Ala	Ile	Glu	Ser	Asn	Ile	Ser	Trp	Ala	Lys	Gly	Leu	Lys	Phe	Glu	Asp
			180					185					190		
Gly	Ala	Ile	Ala	Thr	Asn	Ile	Gly	Asn	Gly	Leu	Glu	Phe	Gly	Ser	Ser
		195					200					205			
Ser	Thr	Glu	Thr	Gly	Val	Asp	Asp	Ala	Tyr	Pro	Ile	Gln	Val	Lys	Leu
	210					215					220				
Gly	Ser	Gly	Leu	Ser	Phe	Asp	Ser	Thr	Gly	Ala	Ile	Met	Ala	Gly	Asn
225					230					235					240
Lys	Glu	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro	Ser	Pro
				245				250					255		
Asn	Cys	Gln	Ile	Leu	Ala	Glu	Asn	Asp	Ala	Lys	Leu	Thr	Leu	Cys	Leu
			260				265						270		
Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Thr	Val	Ser	Val	Leu	Val	Val
		275					280					285			
Gly	Ser	Gly	Asn	Leu	Asn	Pro	Ile	Thr	Gly	Thr	Val	Ser	Ser	Ala	Gln
	290					295					300				
Val	Phe	Leu	Arg	Phe	Asp	Ala	Asn	Gly	Val	Leu	Leu	Thr	Glu	His	Ser
305					310					315					320
Thr	Leu	Lys	Lys	Tyr	Trp	Gly	Tyr	Arg	Gln	Gly	Asp	Ser	Ile	Asp	Gly
				325					330					335	
Thr	Pro	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Lys	Ala	Tyr
			340					345					350		
Pro	Lys	Ser	Gln	Ser	Ser	Thr	Thr	Lys	Asn	Asn	Ile	Val	Gly	Gln	Val
		355					360					365			
Tyr	Met	Asn	Gly	Asp	Val	Ser	Lys	Pro	Met	Leu	Leu	Thr	Ile	Thr	Leu
	370					375				380					
Asn	Gly	Thr	Asp	Asp	Ser	Asn	Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Tyr
385					390					395					400
Thr	Trp	Thr	Asn	Gly	Ser	Tyr	Val	Gly	Ala	Thr	Phe	Gly	Ala	Asn	Ser
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<210> 50

<211> 444

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 5 Fiber

<400> 50
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Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
20 25 30
Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
35 40 45
Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
50 55 60
Lys Leu Gly Asp Gly Val Asp Leu Asp Asp Ser Gly Lys Leu Ile Ser
65 70 75 80
Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr
85 90 95
Ile Ser Leu Asn Met Asp Thr Pro Leu Tyr Asn Asn Asn Gly Lys Leu
100 105 110
Gly Met Lys Val Thr Ala Pro Leu Lys Ile Leu Asp Thr Asp Leu Leu
115 120 125
Lys Thr Leu Val Val Ala Tyr Gly Gln Gly Leu Gly Thr Asn Thr Asn
130 135 140
Gly Ala Leu Val Ala Gln Leu Ala Tyr Pro Leu Val Phe Asn Thr Ala
145 150 155 160
Ser Lys Ile Ala Leu Asn Leu Gly Asn Gly Pro Leu Lys Val Asp Ala
165 170 175
Asn Arg Leu Asn Ile Asn Cys Lys Arg Gly Ile Tyr Val Thr Thr Thr
180 185 190
Lys Asp Ala Leu Glu Ile Asn Ile Ser Trp Ala Asn Ala Met Thr Phe
195 200 205
Ile Gly Asn Ala Ile Gly Val Asn Ile Asp Thr Lys Lys Gly Leu Gln
210 215 220
Phe Gly Thr Ser Ser Thr Glu Thr Asp Val Lys Asn Ala Phe Ser Leu
225 230 235 240
Gln Val Lys Leu Gly Ala Gly Leu Thr Phe Asp Ser Thr Gly Ala Ile
245 250 255
Val Ala Trp Asn Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Ala
260 265 270
Asp Pro Ser Pro Asn Cys His Ile Tyr Ser Ala Lys Asp Ala Lys Leu
275 280 285
Thr Leu Cys Leu Thr Lys Cys Gly Ser Gln Ile Leu Gly Thr Val Ser
290 295 300
Leu Leu Ala Val Ser Gly Ser Leu Ala Pro Ile Thr Gly Ala Val Arg
305 310 315 320
Thr Ala Leu Val Ser Leu Lys Phe Asn Ala Asn Gly Ala Leu Leu Asp
325 330 335
Lys Ser Thr Leu Asn Lys Glu Tyr Trp Asn Tyr Arg Gln Gly Asp Leu
340 345 350
Ile Pro Gly Thr Pro Tyr Thr His Ala Val Gly Phe Met Pro Asn Lys
355 360 365
Lys Ala Tyr Pro Lys Asn Thr Thr Ala Ala Ser Lys Ser His Ile Val
370 375 380
Gly Asp Val Tyr Leu Asp Gly Asp Ala Asp Lys Pro Leu Ser Leu Ile
385 390 395 400
Ile Thr Phe Asn Glu Thr Asp Asp Glu Thr Cys Asp Tyr Cys Ile Asn
405 410 415
Phe Gln Trp Lys Trp Gly Ala Asp Gln Tyr Lys Asp Lys Thr Leu Ala
420 425 430

Thr Ser Ser Phe Thr Phe Ser Tyr Ile Ala Gln Glu
435 440

<210> 51
<211> 445
<212> PRT
<213> Chimpanzee Adenovirus- ChAd 7 Fiber

<400> 51
Met Ser Lys Lys Arg Val Arg Val Asp Asp Asp Phe Asp Pro Val Tyr
1 5 10 15
Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
20 25 30
Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
35 40 45
Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
50 55 60
Lys Leu Gly Glu Gly Val Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser
65 70 75 80
Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr
85 90 95
Ile Ser Leu Asn Met Asp Thr Pro Phe Tyr Asn Asn Asn Gly Lys Leu
100 105 110
Gly Met Lys Val Thr Ala Pro Leu Lys Ile Leu Asp Thr Asp Leu Leu
115 120 125
Lys Thr Leu Val Val Ala Tyr Gly Gln Gly Leu Gly Thr Asn Thr Thr
130 135 140
Gly Ala Leu Val Ala Gln Leu Ala Ala Pro Leu Ala Phe Asp Ser Asn
145 150 155 160
Ser Lys Ile Ala Leu Asn Leu Gly Asn Gly Pro Leu Lys Val Asp Ala
165 170 175
Asn Arg Leu Asn Ile Asn Cys Asn Arg Gly Leu Tyr Val Thr Thr Thr
180 185 190
Lys Asp Ala Leu Glu Thr Asn Ile Ser Trp Ala Asn Ala Met Thr Phe
195 200 205
Ile Gly Asn Ala Met Gly Val Asn Ile Asp Thr Gln Lys Gly Leu Gln
210 215 220
Phe Gly Thr Thr Ser Thr Val Ala Asp Val Lys Asn Ala Tyr Pro Ile
225 230 235 240
Gln Val Lys Leu Gly Ala Gly Leu Thr Phe Asp Ser Thr Gly Ala Ile
245 250 255
Val Ala Trp Asn Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Ala
260 265 270
Asp Pro Ser Pro Asn Cys His Ile Tyr Ser Asp Lys Asp Ala Lys Leu
275 280 285
Thr Leu Cys Leu Thr Lys Cys Gly Ser Gln Ile Leu Gly Thr Val Ser
290 295 300
Leu Ile Ala Val Asp Thr Gly Ser Leu Asn Pro Ile Thr Gly Gln Val
305 310 315 320
Thr Thr Ala Leu Val Ser Leu Lys Phe Asp Ala Asn Gly Val Leu Gln
325 330 335
Thr Ser Ser Thr Leu Asp Lys Glu Tyr Trp Asn Phe Arg Lys Gly Asp
340 345 350
Val Thr Pro Ala Glu Pro Tyr Thr Asn Ala Ile Gly Phe Met Pro Asn

Gly	Ser	Gly	Asp	Leu	Asn	Pro	Ile	Thr	Gly	Thr	Val	Ser	Ser	Ala	Gln
290						295					300				
Val	Phe	Leu	Arg	Phe	Asp	Ala	Asn	Gly	Val	Leu	Leu	Thr	Glu	His	Ser
305					310					315					320
Thr	Leu	Lys	Lys	Tyr	Trp	Gly	Tyr	Arg	Gln	Gly	Asp	Ser	Ile	Asp	Gly
				325					330					335	
Thr	Pro	Tyr	Ala	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Lys	Ala	Tyr
			340					345					350		
Pro	Lys	Ser	Gln	Ser	Ser	Thr	Thr	Lys	Asn	Asn	Ile	Val	Gly	Gln	Val
		355					360					365			
Tyr	Met	Asn	Gly	Asp	Val	Ser	Lys	Pro	Met	Leu	Leu	Thr	Ile	Thr	Leu
370						375					380				
Asn	Gly	Thr	Asp	Asp	Ser	Asn	Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Tyr
385					390					395					400
Thr	Trp	Thr	Asn	Gly	Ser	Tyr	Val	Gly	Ala	Thr	Phe	Gly	Ala	Asn	Ser
			405						410					415	
Tyr	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu							
			420					425							

<210> 53

<211> 425

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 10 Fiber

<400> 53

Met	Ser	Lys	Lys	Arg	Val	Arg	Val	Asp	Asp	Asp	Phe	Asp	Pro	Val	Tyr
1				5					10					15	
Pro	Tyr	Asp	Ala	Asp	Asn	Ala	Pro	Thr	Val	Pro	Phe	Ile	Asn	Pro	Pro
			20					25					30		
Phe	Val	Ser	Ser	Asp	Gly	Phe	Gln	Glu	Lys	Pro	Leu	Gly	Val	Leu	Ser
		35					40					45			
Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Glu	Ile	Thr	Leu
		50				55					60				
Lys	Leu	Gly	Glu	Gly	Val	Asp	Leu	Asp	Ser	Ser	Gly	Lys	Leu	Ile	Ser
65					70					75					80
Asn	Thr	Ala	Thr	Lys	Ala	Ala	Ala	Pro	Leu	Ser	Phe	Ser	Asn	Asn	Thr
				85				90						95	
Ile	Ser	Leu	Asn	Met	Asp	His	Pro	Phe	Tyr	Thr	Lys	Asp	Gly	Lys	Leu
			100					105					110		
Ser	Leu	Gln	Val	Ser	Pro	Pro	Leu	Asn	Ile	Leu	Arg	Thr	Ser	Ile	Leu
		115					120					125			
Asn	Thr	Leu	Ala	Leu	Gly	Phe	Gly	Ser	Gly	Leu	Gly	Leu	Arg	Gly	Ser
		130				135					140				
Ala	Leu	Ala	Val	Gln	Leu	Val	Ser	Pro	Leu	Thr	Phe	Asp	Thr	Asp	Gly
145					150					155					160
Asn	Ile	Lys	Leu	Thr	Leu	Asp	Arg	Gly	Leu	His	Val	Thr	Thr	Gly	Asp
			165						170					175	
Ala	Ile	Glu	Ser	Asn	Ile	Ser	Trp	Ala	Lys	Gly	Leu	Lys	Phe	Glu	Asp
			180					185					190		
Gly	Ala	Ile	Ala	Thr	Asn	Ile	Gly	Asn	Gly	Leu	Glu	Phe	Gly	Ser	Ser
		195					200					205			
Ser	Thr	Glu	Thr	Gly	Val	Asp	Asp	Ala	Tyr	Pro	Ile	Gln	Val	Lys	Leu
		210				215					220				
Gly	Ser	Gly	Leu	Ser	Phe	Asp	Ser	Thr	Gly	Ala	Ile	Met	Ala	Gly	Asn

225					230					235					240
Lys	Glu	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro	Ser	Pro
				245					250					255	
Asn	Cys	Gln	Ile	Leu	Ala	Glu	Asn	Asp	Ala	Lys	Leu	Thr	Leu	Cys	Leu
			260					265					270		
Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Thr	Val	Ser	Val	Leu	Val	Val
		275					280					285			
Gly	Ser	Gly	Asn	Leu	Asn	Pro	Ile	Thr	Gly	Thr	Val	Ser	Ser	Ala	Gln
	290					295					300				
Val	Phe	Leu	Arg	Phe	Asp	Ala	Asn	Gly	Val	Leu	Leu	Thr	Glu	His	Ser
305					310					315					320
Thr	Leu	Lys	Lys	Tyr	Trp	Gly	Tyr	Arg	Gln	Gly	Asp	Ser	Ile	Asp	Gly
			325						330					335	
Thr	Pro	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Lys	Ala	Tyr
			340					345					350		
Pro	Lys	Ser	Gln	Ser	Ser	Thr	Thr	Lys	Asn	Asn	Ile	Val	Gly	Gln	Val
		355					360					365			
Tyr	Met	Asn	Gly	Asp	Val	Ser	Lys	Pro	Met	Leu	Leu	Thr	Ile	Thr	Leu
	370					375					380				
Asn	Gly	Thr	Asp	Asp	Ser	Asn	Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Tyr
385					390					395					400
Thr	Trp	Thr	Asn	Gly	Ser	Tyr	Val	Gly	Ala	Thr	Phe	Gly	Ala	Asn	Ser
			405					410						415	
Tyr	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu							
			420					425							

<210> 54

<211> 578

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 11 Fiber

<400> 54

Met	Lys	Arg	Thr	Lys	Thr	Ser	Asp	Glu	Ser	Phe	Asn	Pro	Val	Tyr	Pro
1				5					10					15	
Tyr	Asp	Thr	Glu	Asn	Gly	Pro	Pro	Ser	Val	Pro	Phe	Leu	Thr	Pro	Pro
		20						25					30		
Phe	Val	Ser	Pro	Asp	Gly	Phe	Gln	Glu	Ser	Pro	Pro	Gly	Val	Leu	Ser
	35						40					45			
Leu	Asn	Leu	Ala	Glu	Pro	Leu	Val	Thr	Ser	His	Gly	Met	Leu	Ala	Leu
	50					55					60				
Lys	Met	Gly	Ser	Gly	Leu	Ser	Leu	Asp	Asp	Ala	Gly	Asn	Leu	Thr	Ser
65					70					75				80	
Gln	Asp	Val	Thr	Thr	Thr	Thr	Pro	Pro	Leu	Lys	Lys	Thr	Lys	Thr	Asn
			85						90					95	
Leu	Ser	Leu	Glu	Thr	Ser	Ala	Pro	Leu	Thr	Val	Ser	Thr	Ser	Gly	Ala
		100						105					110		
Leu	Thr	Leu	Ala	Ala	Ala	Val	Pro	Leu	Ala	Val	Ala	Gly	Thr	Ser	Leu
		115					120					125			
Thr	Met	Gln	Ser	Glu	Ala	Pro	Leu	Thr	Val	Gln	Asp	Ala	Lys	Leu	Thr
	130					135					140				
Leu	Ala	Thr	Lys	Gly	Pro	Leu	Thr	Val	Ser	Glu	Gly	Lys	Leu	Ala	Leu
145					150					155					160
Gln	Thr	Ser	Ala	Pro	Leu	Thr	Ala	Ala	Asp	Ser	Ser	Thr	Leu	Thr	Ile
				165					170					175	

Ser	Ala	Thr	Pro	Pro	Leu	Ser	Thr	Ser	Asn	Gly	Ser	Leu	Gly	Ile	Asp
			180					185					190		
Met	Gln	Ala	Pro	Ile	Tyr	Thr	Thr	Asn	Gly	Lys	Leu	Gly	Leu	Asn	Phe
		195					200					205			
Gly	Ala	Pro	Leu	His	Val	Val	Asp	Ser	Leu	Asn	Ala	Leu	Thr	Val	Val
	210					215					220				
Thr	Gly	Gln	Gly	Leu	Thr	Ile	Asn	Gly	Thr	Ala	Leu	Gln	Thr	Arg	Val
225					230					235					240
Ser	Gly	Ala	Leu	Asn	Tyr	Asp	Ser	Ser	Gly	Asn	Leu	Glu	Leu	Arg	Ala
				245					250					255	
Ala	Gly	Gly	Met	Arg	Val	Asp	Ala	Asn	Gly	Lys	Leu	Ile	Leu	Asp	Val
			260					265					270		
Ala	Tyr	Pro	Phe	Asp	Ala	Gln	Asn	Asn	Leu	Ser	Leu	Arg	Leu	Gly	Gln
		275					280					285			
Gly	Pro	Leu	Phe	Val	Asn	Ser	Ala	His	Asn	Leu	Asp	Val	Asn	Tyr	Asn
	290					295					300				
Arg	Gly	Leu	Tyr	Leu	Phe	Thr	Ser	Gly	Asn	Thr	Lys	Lys	Leu	Glu	Val
305					310					315					320
Asn	Ile	Lys	Thr	Ala	Lys	Gly	Leu	Ile	Tyr	Asp	Asp	Thr	Ala	Ile	Ala
				325					330					335	
Ile	Asn	Pro	Gly	Asp	Gly	Leu	Glu	Phe	Gly	Ser	Gly	Ser	Asp	Thr	Asn
		340						345					350		
Pro	Leu	Lys	Thr	Lys	Leu	Gly	Leu	Gly	Leu	Glu	Tyr	Asp	Ser	Ser	Arg
		355					360					365			
Ala	Ile	Ile	Ala	Lys	Leu	Gly	Thr	Gly	Leu	Ser	Phe	Asp	Asn	Thr	Gly
	370					375					380				
Ala	Ile	Thr	Val	Gly	Asn	Lys	Asn	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr
385					390					395					400
Thr	Pro	Asp	Pro	Ser	Pro	Asn	Cys	Arg	Ile	Tyr	Ser	Glu	Lys	Asp	Ala
				405					410					415	
Lys	Phe	Thr	Leu	Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Val	Leu	Ala	Ser
			420					425					430		
Val	Ser	Val	Leu	Ser	Val	Lys	Gly	Ser	Leu	Ala	Pro	Ile	Ser	Gly	Thr
		435					440					445			
Val	Thr	Ser	Ala	Gln	Ile	Ile	Leu	Arg	Phe	Asp	Glu	Asn	Gly	Val	Leu
	450					455					460				
Leu	Ser	Asn	Ser	Ser	Leu	Asp	Pro	Gln	Tyr	Trp	Asn	Tyr	Arg	Lys	Gly
465					470					475					480
Asp	Leu	Thr	Glu	Gly	Thr	Ala	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro
				485					490					495	
Asn	Leu	Thr	Ala	Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Ser	Asn
			500					505					510		
Ile	Val	Ser	Gln	Val	Tyr	Leu	Asn	Gly	Asp	Lys	Ser	Lys	Pro	Met	Ile
		515					520					525			
Leu	Thr	Ile	Thr	Leu	Asn	Gly	Thr	Asn	Glu	Thr	Gly	Asp	Ala	Thr	Val
	530					535					540				
Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Trp	Asn	Trp	Asn	Gly	Ser	Asn	Tyr
545					550					555					560
Ile	Asn	Glu	Thr	Phe	Gln	Thr	Asn	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala
				565					570					575	
Gln	Glu														

<210> 55

<211> 442
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 16 Fiber

<400> 55
 Met Ser Lys Lys Arg Val Arg Val Asp Asp Asp Phe Asp Pro Val Tyr
 1 5 10 15
 Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
 20 25 30
 Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
 35 40 45
 Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
 50 55 60
 Lys Leu Gly Glu Gly Val Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser
 65 70 75 80
 Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr
 85 90 95
 Ile Ser Leu Asn Met Asp Thr Pro Phe Tyr Thr Lys Asp Gly Lys Leu
 100 105 110
 Thr Met Gln Val Thr Ala Pro Leu Lys Leu Ala Asn Thr Ala Ile Leu
 115 120 125
 Asn Thr Leu Ala Met Ala Tyr Gly Asn Gly Leu Gly Leu Ser Asn Asn
 130 135 140
 Ala Leu Thr Val Gln Leu Gln Ser Pro Leu Thr Phe Asn Asn Ser Lys
 145 150 155 160
 Val Ala Ile Asn Leu Gly Asn Gly Pro Leu Asn Val Thr Ser Asn Arg
 165 170 175
 Leu Ser Ile Asn Cys Lys Arg Gly Val Tyr Val Thr Thr Thr Gly Asp
 180 185 190
 Ala Ile Glu Thr Asn Ile Ser Trp Ser Asn Ala Ile Lys Phe Ile Gly
 195 200 205
 Asn Ala Met Gly Val Asn Ile Asp Thr Asn Lys Gly Leu Gln Phe Gly
 210 215 220
 Thr Thr Ser Thr Val Thr Asp Val Thr Asn Ala Phe Pro Ile Gln Val
 225 230 235 240
 Lys Leu Gly Ala Gly Leu Ala Phe Asp Ser Thr Gly Ala Ile Val Ala
 245 250 255
 Trp Asn Lys Glu Asp Asp Ser Leu Thr Leu Trp Thr Thr Pro Asp Pro
 260 265 270
 Ser Pro Asn Cys Lys Ile Ala Ser Asp Lys Asp Ala Lys Leu Thr Leu
 275 280 285
 Cys Leu Thr Lys Cys Gly Ser Gln Ile Leu Gly Thr Val Ser Leu Leu
 290 295 300
 Ala Val Ser Gly Ser Leu Ala Pro Ile Thr Gly Ala Val Ser Thr Ala
 305 310 315 320
 Leu Val Ser Leu Lys Phe Asp Ala Asn Gly Ala Leu Leu Glu Lys Ser
 325 330 335
 Thr Leu Asn Arg Glu Tyr Trp Asn Tyr Arg Gln Gly Asp Leu Ile Pro
 340 345 350
 Gly Thr Pro Tyr Thr His Ala Val Gly Phe Met Pro Asn Lys Lys Ala
 355 360 365
 Tyr Pro Lys Asn Thr Thr Ala Ala Ser Lys Ser His Ile Val Gly Glu
 370 375 380
 Val Tyr Leu Asp Gly Asp Ala Asp Lys Pro Leu Ser Leu Ile Ile Thr
 385 390 395 400

Phe	Asn	Glu	Thr	Asp	Asp	Glu	Ser	Cys	Asp	Tyr	Cys	Met	Asn	Phe	Gln
				405					410					415	
Trp	Lys	Trp	Gly	Ala	Asp	Gln	Tyr	Lys	Asp	Lys	Thr	Leu	Ala	Thr	Ser
			420					425					430		
Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu						
		435					440								

<210> 56
 <211> 543
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 17 Fiber

<400> 56

Met	Lys	Arg	Thr	Lys	Thr	Ser	Asp	Glu	Ser	Phe	Asn	Pro	Val	Tyr	Pro
1				5					10					15	
Tyr	Asp	Thr	Glu	Ser	Gly	Pro	Pro	Ser	Val	Pro	Phe	Leu	Thr	Pro	Pro
			20					25					30		
Phe	Val	Ser	Pro	Asp	Gly	Phe	Gln	Glu	Ser	Pro	Pro	Gly	Val	Leu	Ser
		35					40					45			
Leu	Asn	Leu	Ala	Glu	Pro	Leu	Val	Thr	Ser	His	Gly	Met	Leu	Ala	Leu
	50					55				60					
Lys	Met	Gly	Ser	Gly	Leu	Ser	Leu	Asp	Asp	Ala	Gly	Asn	Leu	Thr	Ser
65					70					75					80
Gln	Asp	Ile	Thr	Ser	Thr	Thr	Pro	Pro	Leu	Lys	Lys	Thr	Lys	Thr	Asn
				85					90					95	
Leu	Ser	Leu	Glu	Thr	Ser	Ser	Pro	Leu	Thr	Val	Ser	Thr	Ser	Gly	Ala
			100					105					110		
Leu	Thr	Val	Ala	Ala	Ala	Ala	Pro	Leu	Ala	Val	Ala	Gly	Thr	Ser	Leu
		115					120					125			
Thr	Met	Gln	Ser	Glu	Ala	Pro	Leu	Ala	Val	Gln	Asp	Ala	Lys	Leu	Thr
	130					135				140					
Leu	Ala	Thr	Lys	Gly	Pro	Leu	Thr	Val	Ser	Glu	Gly	Lys	Leu	Ala	Leu
145					150					155					160
Gln	Thr	Ser	Ala	Pro	Leu	Thr	Ala	Ala	Asp	Ser	Ser	Thr	Leu	Thr	Val
				165					170					175	
Ser	Ser	Thr	Pro	Pro	Ile	Ser	Val	Ser	Ser	Gly	Ser	Leu	Gly	Leu	Asp
			180					185					190		
Met	Glu	Asp	Pro	Met	Tyr	Thr	His	Asp	Gly	Lys	Leu	Gly	Ile	Arg	Ile
		195					200					205			
Gly	Gly	Pro	Leu	Arg	Val	Val	Asp	Ser	Leu	His	Thr	Leu	Thr	Val	Val
	210					215					220				
Thr	Gly	Asn	Gly	Leu	Thr	Val	Asp	Asn	Asn	Ala	Leu	Gln	Thr	Arg	Val
225					230					235					240
Thr	Gly	Ala	Leu	Gly	Tyr	Asp	Thr	Ser	Gly	Asn	Leu	Gln	Leu	Arg	Ala
				245					250					255	
Ala	Gly	Gly	Met	Arg	Ile	Asp	Ala	Asn	Gly	Gln	Leu	Ile	Leu	Asp	Val
			260					265					270		
Ala	Tyr	Pro	Phe	Asp	Ala	Gln	Asn	Asn	Leu	Ser	Leu	Arg	Leu	Gly	Gln
		275					280					285			
Gly	Pro	Leu	Tyr	Val	Asn	Thr	Asp	His	Asn	Leu	Asp	Leu	Asn	Cys	Asn
	290					295					300				
Arg	Gly	Leu	Thr	Thr	Thr	Thr	Thr	Asn	Asn	Thr	Lys	Lys	Leu	Glu	Thr
305					310					315					320
Lys	Ile	Ser	Ser	Gly	Leu	Asp	Tyr	Asp	Thr	Asn	Gly	Ala	Val	Ile	Ile

				325					330					335			
Lys	Leu	Gly	Thr	Gly	Leu	Ser	Phe	Asp	Asn	Thr	Gly	Ala	Leu	Thr	Val		
				340				345					350				
Gly	Asn	Thr	Gly	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro		
				355				360					365				
Ser	Pro	Asn	Cys	Arg	Ile	His	Ser	Asp	Lys	Asp	Cys	Lys	Phe	Thr	Leu		
							375					380					
Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Ser	Val	Ala	Ala	Leu		
385					390					395					400		
Ala	Val	Ser	Gly	Asn	Leu	Ala	Ser	Ile	Thr	Gly	Thr	Val	Ala	Ser	Val		
				405					410						415		
Thr	Ile	Phe	Leu	Arg	Phe	Asp	Gln	Asn	Gly	Val	Leu	Met	Glu	Asn	Ser		
				420				425					430				
Ser	Leu	Asp	Lys	Gln	Tyr	Trp	Asn	Phe	Arg	Asn	Gly	Asn	Ser	Thr	Asn		
				435			440					445					
Ala	Ala	Pro	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Ala	Ala		
				450		455					460						
Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Asn	Asn	Ile	Val	Ser	Gln		
465				470					475						480		
Val	Tyr	Leu	Asn	Gly	Asp	Lys	Ser	Lys	Pro	Met	Thr	Leu	Thr	Ile	Thr		
				485					490					495			
Leu	Asn	Gly	Thr	Asn	Glu	Ser	Ser	Glu	Thr	Ser	Gln	Val	Ser	His	Tyr		
				500				505					510				
Ser	Met	Ser	Phe	Thr	Trp	Ala	Trp	Glu	Ser	Gly	Gln	Tyr	Ala	Thr	Glu		
				515			520					525					
Thr	Phe	Ala	Thr	Asn	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Glu	Gln			
				530		535					540						

<210> 57
 <211> 543
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 19 Fiber

<400> 57

Met	Lys	Arg	Thr	Lys	Thr	Ser	Asp	Lys	Ser	Phe	Asn	Pro	Val	Tyr	Pro		
1				5				10					15				
Tyr	Asp	Thr	Glu	Asn	Gly	Pro	Pro	Ser	Val	Pro	Phe	Leu	Thr	Pro	Pro		
			20					25				30					
Phe	Val	Ser	Pro	Asp	Gly	Phe	Gln	Glu	Ser	Pro	Pro	Gly	Val	Leu	Ser		
			35				40					45					
Leu	Asn	Leu	Ala	Glu	Pro	Leu	Val	Thr	Ser	His	Gly	Met	Leu	Ala	Leu		
			50			55					60						
Lys	Met	Gly	Ser	Gly	Leu	Ser	Leu	Asp	Asp	Ala	Gly	Asn	Leu	Thr	Ser		
65				70					75					80			
Gln	Asp	Val	Thr	Thr	Thr	Pro	Pro	Leu	Lys	Lys	Thr	Lys	Thr	Asn			
			85					90					95				
Leu	Ser	Leu	Glu	Thr	Ser	Ala	Pro	Leu	Thr	Val	Ser	Thr	Ser	Gly	Ala		
			100					105					110				
Leu	Thr	Leu	Ala	Ala	Ala	Ala	Pro	Leu	Ala	Val	Ala	Gly	Thr	Ser	Leu		
			115				120					125					
Thr	Met	Gln	Ser	Glu	Ala	Pro	Leu	Thr	Val	Gln	Asp	Ala	Lys	Leu	Thr		
			130			135					140						
Leu	Ala	Thr	Lys	Gly	Pro	Leu	Thr	Val	Ser	Glu	Gly	Lys	Leu	Ala	Leu		
145					150					155					160		

Gln	Thr	Ser	Ala	Pro	Leu	Thr	Ala	Ala	Asp	Ser	Ser	Thr	Leu	Thr	Val	
				165					170						175	
Ser	Ala	Thr	Pro	Pro	Ile	Ser	Val	Ser	Ser	Gly	Ser	Leu	Gly	Leu	Asp	
			180					185						190		
Met	Glu	Asp	Pro	Met	Tyr	Thr	His	Asp	Gly	Lys	Leu	Gly	Ile	Arg	Ile	
		195					200					205				
Gly	Gly	Pro	Leu	Arg	Val	Val	Asp	Ser	Leu	His	Thr	Leu	Thr	Val	Val	
	210					215					220					
Thr	Gly	Asn	Gly	Ile	Ala	Val	Asp	Asn	Asn	Ala	Leu	Gln	Thr	Arg	Val	
225					230					235					240	
Thr	Gly	Ala	Leu	Gly	Tyr	Asp	Thr	Ser	Gly	Asn	Leu	Gln	Leu	Arg	Ala	
				245					250					255		
Ala	Gly	Gly	Met	Arg	Ile	Asp	Ala	Asn	Gly	Gln	Leu	Ile	Leu	Asp	Val	
			260					265					270			
Ala	Tyr	Pro	Phe	Asp	Ala	Gln	Asn	Asn	Leu	Ser	Leu	Arg	Leu	Gly	Gln	
		275					280					285				
Gly	Pro	Leu	Tyr	Val	Asn	Thr	Asp	His	Asn	Leu	Asp	Leu	Asn	Cys	Asn	
	290					295					300					
Arg	Gly	Leu	Thr	Thr	Thr	Thr	Thr	Asn	Asn	Thr	Lys	Lys	Leu	Glu	Thr	
305					310					315					320	
Lys	Ile	Gly	Ser	Gly	Leu	Asp	Tyr	Asp	Thr	Asn	Gly	Ala	Val	Ile	Ile	
				325					330					335		
Lys	Leu	Gly	Thr	Gly	Val	Ser	Phe	Asp	Ser	Thr	Gly	Ala	Leu	Ser	Val	
			340					345					350			
Gly	Asn	Thr	Gly	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro	
		355					360					365				
Ser	Pro	Asn	Cys	Arg	Ile	His	Ser	Asp	Lys	Asp	Cys	Lys	Phe	Thr	Leu	
		370				375					380					
Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Ser	Val	Ala	Ala	Leu	
385					390					395					400	
Ala	Val	Ser	Gly	Asn	Leu	Ala	Ser	Ile	Thr	Gly	Thr	Val	Ser	Ser	Val	
				405					410					415		
Thr	Ile	Phe	Leu	Arg	Phe	Asp	Gln	Asn	Gly	Val	Leu	Met	Glu	Asn	Ser	
			420				425						430			
Ser	Leu	Asp	Lys	Gln	Tyr	Trp	Asn	Phe	Arg	Asn	Gly	Asn	Ser	Thr	Asn	
		435					440					445				
Ala	Thr	Pro	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Ala	Ala	
	450					455					460					
Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Asn	Asn	Ile	Val	Ser	Gln	
465					470					475					480	
Val	Tyr	Leu	Asn	Gly	Asp	Lys	Ser	Lys	Pro	Met	Thr	Leu	Thr	Ile	Thr	
				485					490					495		
Leu	Asn	Gly	Thr	Asn	Glu	Ser	Ser	Glu	Thr	Ser	Gln	Val	Ser	His	Tyr	
			500					505					510			
Ser	Met	Ser	Phe	Thr	Trp	Ala	Trp	Glu	Ser	Gly	Gln	Tyr	Ala	Thr	Glu	
		515					520					525				
Thr	Phe	Ala	Thr	Asn	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Glu	Gln		
		530				535						540				

<210> 58

<211> 963

<212> DNA

<213> Chimapnzee Adenovirus- ChAd 8 Fiber

<400> 58

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atgaccaaac gagttcgact aagcagctcc ttcaatccgg tctacccta tgaagatgaa 60
agcagctccc aacacccctt tataaacctt ggtttcattt cctcaaattg atttacacaa 120
agcccagatg gggttcttac acttaaatgc ttatcgccgc tcaccaccac aggcggctcc 180
cttcaactta aagttggagg aggattatca gtggatgaca ctgacggttc attagaagaa 240
aacataagca ttacagcacc acttaataaa acaagtcact caataggttt atccatagga 300
gatgggttgg aaacaaaaaa caaccaacta tgtgctaagc tgggagacgg tcttacattt 360
aatacaggca gcatatgcat agatactgac attaatacat tatggacagg agcaacacca 420
gacgctaatt gcttagtcct tggaactgaa tctaattgatt gtaaacttac actggcactt 480
gtaaagtcag gagccttagt aaatgcttac gtagcacttg ttggagcctc agacgccgtt 540
aatgatttaa ccacagaaac aagtgtctca ataattgcag acatatattt tgatgcgcaa 600
ggaaaacttc ttcttgattt atcagcactc aaaacagagc taaaacacaa atctggacaa 660
ggcacttcga cagcagatcc caataactgt aaaagcttta tgccaagtct aaatgcatat 720
ccactgcgcc ccaatggagg caacggaaac tatatttatg gaaccaccta ctacagggcc 780
agagatgaaa ccctttatga acttaaaacc tctgtaatgc ttaactacaa aattaccagt 840
ggactatgtg catatgccat gcattttcag tggctcttga atagtgggac taaaccagaa 900
gacactcccg ccactttcat tgcctcccc tttgtctttt cctacattag agaagatgac 960
tga 963
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<210> 59

<211> 320

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 8 Fiber

<400> 59

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Met Thr Lys Arg Val Arg Leu Ser Ser Ser Phe Asn Pro Val Tyr Pro
 1          5          10          15
Tyr Glu Asp Glu Ser Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe
 20          25          30
Ile Ser Ser Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu
 35          40          45
Lys Cys Leu Ser Pro Leu Thr Thr Gly Gly Ser Leu Gln Leu Lys
 50          55          60
Val Gly Gly Gly Leu Ser Val Asp Asp Thr Asp Gly Ser Leu Glu Glu
 65          70          75          80
Asn Ile Ser Ile Thr Ala Pro Leu Asn Lys Thr Ser His Ser Ile Gly
 85          90          95
Leu Ser Ile Gly Asp Gly Leu Glu Thr Lys Asn Asn Gln Leu Cys Ala
100          105          110
Lys Leu Gly Asp Gly Leu Thr Phe Asn Thr Gly Ser Ile Cys Ile Asp
115          120          125
Thr Asp Ile Asn Thr Leu Trp Thr Gly Ala Thr Pro Asp Ala Asn Cys
130          135          140
Leu Val Leu Gly Thr Glu Ser Asn Asp Cys Lys Leu Thr Leu Ala Leu
145          150          155          160
Val Lys Ser Gly Ala Leu Val Asn Ala Tyr Val Ala Leu Val Gly Ala
165          170          175
Ser Asp Ala Val Asn Asp Leu Thr Thr Glu Thr Ser Ala Gln Ile Ile
180          185          190
Ala Asp Ile Tyr Phe Asp Ala Gln Gly Lys Leu Leu Pro Asp Leu Ser
195          200          205
Ala Leu Lys Thr Glu Leu Lys His Lys Ser Gly Gln Gly Thr Ser Thr
210          215          220
Ala Asp Pro Asn Asn Cys Lys Ser Phe Met Pro Ser Leu Asn Ala Tyr
225          230          235          240
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Pro	Leu	Arg	Pro	Asn	Gly	Gly	Asn	Gly	Asn	Tyr	Ile	Tyr	Gly	Thr	Thr
				245					250					255	
Tyr	Tyr	Arg	Ala	Arg	Asp	Glu	Thr	Leu	Tyr	Glu	Leu	Lys	Thr	Ser	Val
			260					265					270		
Met	Leu	Asn	Tyr	Lys	Ile	Thr	Ser	Gly	Leu	Cys	Ala	Tyr	Ala	Met	His
		275						280					285		
Phe	Gln	Trp	Ser	Trp	Asn	Ser	Gly	Thr	Lys	Pro	Glu	Asp	Thr	Pro	Ala
	290					295					300				
Thr	Phe	Ile	Ala	Ser	Pro	Phe	Val	Phe	Ser	Tyr	Ile	Arg	Glu	Asp	Asp
305					310					315					320

<210> 60

<211> 1062

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 22 Fiber

<400> 60

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agcagctcac	aacaccccctt	tataaacctt	ggtttcattt	cctcaaattg	ttttgcacaa	120
agcccagatg	gagtttctaac	tcttaaattgt	gttaatccgc	tcactaccgc	cagcggaccc	180
ctccaactta	aagttggaag	cagtcttaca	gtagataata	tcgatgggtc	tttggaggaa	240
aatataactg	ccgcagcgcc	actcactaaa	actaaccact	ccatagggtt	atcaatagga	300
tctggcttgc	aaacaaagga	tgataaactt	tgtttatcgc	tgggagatgg	gttggttaaca	360
aaggatgata	aactatgttt	atcgctggga	gatgggttaa	taacaaaaga	tgatacacta	420
tgtgccaaac	taggacatgg	ccttgtgttt	gactcttcca	atgctatcac	catagaaaac	480
aacaccttgt	ggacaggtgc	aaaaccaagc	gccaactgtg	taattaaaga	gggagaagat	540
tccccagact	gtaagctcac	tttagttcta	gtgaagaatg	gaggactgat	aaatggatac	600
ataacattaa	tgggagcctc	agaatatact	aacaccttgt	ttaaaaacaa	acaagttaca	660
atcgatgtaa	acctcgcat	tgataatact	ggccaaatta	tcacttacct	atcatccctt	720
aaaagtaacc	tgaacttta	agacaaccaa	aacatggcta	ctggaaccat	aaccagtgc	780
aaaggcttca	tgcccagcac	caccgcctat	ccatttataa	catacgccac	tcagtcccta	840
aatgaagatt	acatttatgg	agagtgttac	tacaaatcta	ccaatggaac	tctctttcca	900
ctaaaagtta	ctgtcacact	aaacagacgt	atgtcagctt	ctggaatggc	ctatgctatg	960
aatttttcat	ggtctctaaa	tgacagaggaa	gccccggaaa	ctaccgaagt	cactctcatt	1020
acctccccct	tctttttttc	ttatatcaga	gaagatgact	ga		1062

<210> 61

<211> 353

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 22 Fiber

<400> 61

Met	Ala	Lys	Arg	Ala	Arg	Leu	Ser	Ser	Ser	Phe	Asn	Pro	Val	Tyr	Pro
1				5					10					15	
Tyr	Glu	Asp	Glu	Ser	Ser	Ser	Gln	His	Pro	Phe	Ile	Asn	Pro	Gly	Phe
			20					25					30		
Ile	Ser	Ser	Asn	Gly	Phe	Ala	Gln	Ser	Pro	Asp	Gly	Val	Leu	Thr	Leu
			35				40					45			
Lys	Cys	Val	Asn	Pro	Leu	Thr	Thr	Ala	Ser	Gly	Pro	Leu	Gln	Leu	Lys
	50					55				60					
Val	Gly	Ser	Ser	Leu	Thr	Val	Asp	Asn	Ile	Asp	Gly	Ser	Leu	Glu	Glu
65					70				75					80	
Asn	Ile	Thr	Ala	Ala	Pro	Leu	Thr	Lys	Thr	Asn	His	Ser	Ile	Gly	
				85				90					95		

Leu	Ser	Ile	Gly	Ser	Gly	Leu	Gln	Thr	Lys	Asp	Asp	Lys	Leu	Cys	Leu	
			100					105					110			
Ser	Leu	Gly	Asp	Gly	Leu	Val	Thr	Lys	Asp	Asp	Lys	Leu	Cys	Leu	Ser	
		115					120					125				
Leu	Gly	Asp	Gly	Leu	Ile	Thr	Lys	Asp	Asp	Thr	Leu	Cys	Ala	Lys	Leu	
		130				135					140					
Gly	His	Gly	Leu	Val	Phe	Asp	Ser	Ser	Asn	Ala	Ile	Thr	Ile	Glu	Asn	
145					150					155					160	
Asn	Thr	Leu	Trp	Thr	Gly	Ala	Lys	Pro	Ser	Ala	Asn	Cys	Val	Ile	Lys	
				165					170					175		
Glu	Gly	Glu	Asp	Ser	Pro	Asp	Cys	Lys	Leu	Thr	Leu	Val	Leu	Val	Lys	
			180					185					190			
Asn	Gly	Gly	Leu	Ile	Asn	Gly	Tyr	Ile	Thr	Leu	Met	Gly	Ala	Ser	Glu	
		195				200						205				
Tyr	Thr	Asn	Thr	Leu	Phe	Lys	Asn	Lys	Gln	Val	Thr	Ile	Asp	Val	Asn	
	210					215					220					
Leu	Ala	Phe	Asp	Asn	Thr	Gly	Gln	Ile	Ile	Thr	Tyr	Leu	Ser	Ser	Leu	
225					230					235					240	
Lys	Ser	Asn	Leu	Asn	Phe	Lys	Asp	Asn	Gln	Asn	Met	Ala	Thr	Gly	Thr	
				245					250					255		
Ile	Thr	Ser	Ala	Lys	Gly	Phe	Met	Pro	Ser	Thr	Thr	Ala	Tyr	Pro	Phe	
			260				265						270			
Ile	Thr	Tyr	Ala	Thr	Gln	Ser	Leu	Asn	Glu	Asp	Tyr	Ile	Tyr	Gly	Glu	
		275				280						285				
Cys	Tyr	Tyr	Lys	Ser	Thr	Asn	Gly	Thr	Leu	Phe	Pro	Leu	Lys	Val	Thr	
	290					295					300					
Val	Thr	Leu	Asn	Arg	Arg	Met	Ser	Ala	Ser	Gly	Met	Ala	Tyr	Ala	Met	
305					310					315					320	
Asn	Phe	Ser	Trp	Ser	Leu	Asn	Ala	Glu	Glu	Ala	Pro	Glu	Thr	Thr	Glu	
				325					330					335		
Val	Thr	Leu	Ile	Thr	Ser	Pro	Phe	Phe	Phe	Ser	Tyr	Ile	Arg	Glu	Asp	
			340					345					350			

Asp

<210> 62
 <211> 1686
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 24 Fiber

<400> 62
 atgtcagatt cttgctcctg tccttcgcga ccactatct tcatgttggt gcagatgaag 60
 cgcacaaaaa cgtctgacga gagcttcaac cccgtgtacc cctatgacac ggaaaacggt 120
 cctccctcctg tccctttcct caccctctcc ttcgtgtctc ccgatggatt ccaagagagc 180
 cccccggggg tctgtctctt gaacctggcc gagccccctg tcaacttcca cggcatgctc 240
 gccctgaaaa tgggaagtgg cctctccctg gacgacgcc gcaacctcac ctctcaagat 300
 gtcaccacca ctaccctctc cctgaaaaaa accaagacca acctcagcct agaaacctca 360
 gccccctga ctgtgagcac ctcaggcgcc ctcaccctag cggccgccgc tccccctggc 420
 gtggccggca cctccctcac catgcaatca gaggccccc tgacagtaca ggatgcaaaa 480
 ctcacctggt ccaccaaggg ccccctgacc gtgtctgaag gcaaaactggc cttgcagacc 540
 tcggccccac tgacggccgc tgacagcagc accctcaccg ttagcgccac accacccatc 600
 aatgtaagca gtggaagttt gggcttagac atggaaaatc ccatgtatac tcatgacgga 660
 aaactgggaa taagaattgg gggccactg agagtagtag acagcctgca cacactgact 720
 gtagttaccg gaaatggaat agctgtagat aacaatgccc tccaaactag agttacgggc 780

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gccctggggtt atgacacatc aggaaaccta caactgagag ccgcggggggg tatgcgaatt 840
gatgcaaattg gccaaacttat ccttgatgtg gcatacccat ttgatgctca aaacaattctc 900
agccttagac ttggtcagggt acccctgtat gtaaacacag accacaacct agatttgaat 960
tgcaacagag gtctgaccac aactaccacc aacaacacaa aaaaacttga aactaaaatt 1020
ggctcaggct tagactatga taccaatggt gctgtcatta ttaaacttgg cactgggtgc 1080
agctttgaca gcacaggcgc cctaagtgtg ggaaacactg gcgatgataa actgactctg 1140
tggacaaccc cagacccatc tccaaattgc agaattcact cagacaaaga ctgcaagttt 1200
actctagtcc taactaagtg tggaagtcaa atcctggctt ctgtcgccgc cctagcgggtg 1260
tcaggaaatc tggcttcaat aacaggcacc gtttccagcg ttaccatctt tctcagattt 1320
gatcagaatg gagtgcttat ggaaaactcc tcgctagaca agcagtactg gaactttaga 1380
aatggtaatt caaccaatgc caccctctac accaatgcag ttgggtttcat gccaaacctc 1440
gcagcatacc ccaagacaca gagtcagact gctaaaaaca acattgtaag tcagggtttac 1500
ttgaatgggg acaaattcaa acccatgac cttaccatta ccctcaatgg aactaatgaa 1560
tccagtgaag ctagccagggt gagtcactac tccatgtcat ttacgtgggc ttgggagagt 1620
gggcaatatg ccaccgaaac ctttgccacc aattccttta ccttctctta cattgctgaa 1680
caataa 1686

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<210> 63
<211> 543
<212> PRT
<213> Chimpanzee Adenovirus- ChAd 24 Fiber

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<400> 63
Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro
1 5 10 15
Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30
Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45
Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60
Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80
Gln Asp Val Thr Thr Thr Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95
Leu Ser Leu Glu Thr Ser Ala Pro Leu Thr Val Ser Thr Ser Gly Ala
100 105 110
Leu Thr Leu Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115 120 125
Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
130 135 140
Leu Ala Thr Lys Gly Pro Leu Thr Val Ser Glu Gly Lys Leu Ala Leu
145 150 155 160
Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
165 170 175
Ser Ala Thr Pro Pro Ile Asn Val Ser Ser Gly Ser Leu Gly Leu Asp
180 185 190
Met Glu Asn Pro Met Tyr Thr His Asp Gly Lys Leu Gly Ile Arg Ile
195 200 205
Gly Gly Pro Leu Arg Val Val Asp Ser Leu His Thr Leu Thr Val Val
210 215 220
Thr Gly Asn Gly Ile Ala Val Asp Asn Asn Ala Leu Gln Thr Arg Val
225 230 235 240
Thr Gly Ala Leu Gly Tyr Asp Thr Ser Gly Asn Leu Gln Leu Arg Ala
245 250 255

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Ala	Gly	Gly	Met	Arg	Ile	Asp	Ala	Asn	Gly	Gln	Leu	Ile	Leu	Asp	Val		
			260					265					270				
Ala	Tyr	Pro	Phe	Asp	Ala	Gln	Asn	Asn	Leu	Ser	Leu	Arg	Leu	Gly	Gln		
		275					280					285					
Gly	Pro	Leu	Tyr	Val	Asn	Thr	Asp	His	Asn	Leu	Asp	Leu	Asn	Cys	Asn		
	290					295					300						
Arg	Gly	Leu	Thr	Thr	Thr	Thr	Thr	Asn	Asn	Thr	Lys	Lys	Leu	Glu	Thr		
305					310					315					320		
Lys	Ile	Gly	Ser	Gly	Leu	Asp	Tyr	Asp	Thr	Asn	Gly	Ala	Val	Ile	Ile		
				325					330					335			
Lys	Leu	Gly	Thr	Gly	Val	Ser	Phe	Asp	Ser	Thr	Gly	Ala	Leu	Ser	Val		
		340						345					350				
Gly	Asn	Thr	Gly	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro		
	355						360					365					
Ser	Pro	Asn	Cys	Arg	Ile	His	Ser	Asp	Lys	Asp	Cys	Lys	Phe	Thr	Leu		
	370					375					380						
Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Ser	Val	Ala	Ala	Leu		
385					390					395					400		
Ala	Val	Ser	Gly	Asn	Leu	Ala	Ser	Ile	Thr	Gly	Thr	Val	Ser	Ser	Val		
				405					410					415			
Thr	Ile	Phe	Leu	Arg	Phe	Asp	Gln	Asn	Gly	Val	Leu	Met	Glu	Asn	Ser		
			420					425					430				
Ser	Leu	Asp	Lys	Gln	Tyr	Trp	Asn	Phe	Arg	Asn	Gly	Asn	Ser	Thr	Asn		
	435						440					445					
Ala	Thr	Pro	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Ala	Ala		
	450				455					460							
Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Asn	Asn	Ile	Val	Ser	Gln		
465					470					475					480		
Val	Tyr	Leu	Asn	Gly	Asp	Lys	Ser	Lys	Pro	Met	Ile	Leu	Thr	Ile	Thr		
				485					490					495			
Leu	Asn	Gly	Thr	Asn	Glu	Ser	Ser	Glu	Thr	Ser	Gln	Val	Ser	His	Tyr		
		500						505					510				
Ser	Met	Ser	Phe	Thr	Trp	Ala	Trp	Glu	Ser	Gly	Gln	Tyr	Ala	Thr	Glu		
	515					520						525					
Thr	Phe	Ala	Thr	Asn	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Glu	Gln			
	530					535					540						

<210> 64
 <211> 1335
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 26 Fiber

<400> 64
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 gagaagcccc tgggggtgct gtccctgcgt ctggccgac ccgtcaccac caagaacggg 180
 gaaatcacc tcaagctggg agatggggtg gacctcgacg actcgggaaa actcatctcc 240
 aacacggcca ccaaggccgc cgcccctctc agtttttcca acaacaccat ttcccttaac 300
 atggataccc ctcttttaca caacaatgga aagctaggta tgaaggtaac cgcaccatta 360
 aagatattag acacagatct actaaaaaca cttgttggtt cttatgggca gggattagga 420
 acaaacacca atggtgctct tgttgcccaa ctagcatacc cacttgtttt taataccgct 480
 agcaaaattg cccttaattt aggcaatgga ccattaaaag tggatgcaaa tagactgaac 540
 attaattgca aaagaggat ctatgtcact accacaaaag atgcactgga gattaatatc 600
 agttgggcaa atgctatgac atttatagga aatgccattg gtgtcaatat tgacacaaaa 660

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aaaggcctac agttcggcac ttcaagcact gaaacagatg ttaaaaatgc ttttccactc 720
caagtaaaac ttggagctgg tcttacattt gacagcacag gtgccattgt tgcttggaac 780
aaagaagatg acaaaacttac actgtggacc acagccgatc catctccaaa ctgtcacata 840
tattctgcaa aggatgctaa gcttacactc tgcttgacaa agtgtggtag tcaaataccta 900
ggcactgtct ccctattagc agtcagtggc agcttggctc ctatcacagg ggctgttaga 960
actgcacttg tatcactcaa attcaatgct aatggagccc ttttggacaa atcaactctg 1020
aacaagaat actggaacta cagacaagga gatctaattc caggtagacc atatacacat 1080
gctgtgggtt tcatgcctaa caaaaaagcc taccctaaaa acacaactgc agcttccaag 1140
agccacattg tgggtgatgt gtatttagat ggagatgcag ataaaccttt atctcttacc 1200
atcactttca atgaaactga tgatgaaacc tgtgattact gcatcaactt tcaatggaaa 1260
tggggagctg atcaatataa ggataagaca ctcgcaacca gttcattcac cttctcatac 1320
atcgcccaag aataa 1335

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<210> 65

<211> 444

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 26 Fiber

<400> 65

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Met Ser Lys Lys Arg Val Arg Val Asp Asp Asp Phe Asp Pro Val Tyr
1      5      10
Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
20     25     30
Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
35     40     45
Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
50     55     60
Lys Leu Gly Asp Gly Val Asp Leu Asp Asp Ser Gly Lys Leu Ile Ser
65     70     75
Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr
85     90     95
Ile Ser Leu Asn Met Asp Thr Pro Leu Tyr Asn Asn Asn Gly Lys Leu
100    105    110
Gly Met Lys Val Thr Ala Pro Leu Lys Ile Leu Asp Thr Asp Leu Leu
115    120    125
Lys Thr Leu Val Val Ala Tyr Gly Gln Gly Leu Gly Thr Asn Thr Asn
130    135    140
Gly Ala Leu Val Ala Gln Leu Ala Tyr Pro Leu Val Phe Asn Thr Ala
145    150    155
Ser Lys Ile Ala Leu Asn Leu Gly Asn Gly Pro Leu Lys Val Asp Ala
165    170    175
Asn Arg Leu Asn Ile Asn Cys Lys Arg Gly Ile Tyr Val Thr Thr Thr
180    185    190
Lys Asp Ala Leu Glu Ile Asn Ile Ser Trp Ala Asn Ala Met Thr Phe
195    200    205
Ile Gly Asn Ala Ile Gly Val Asn Ile Asp Thr Lys Lys Gly Leu Gln
210    215    220
Phe Gly Thr Ser Ser Thr Glu Thr Asp Val Lys Asn Ala Phe Pro Leu
225    230    235
Gln Val Lys Leu Gly Ala Gly Leu Thr Phe Asp Ser Thr Gly Ala Ile
245    250    255
Val Ala Trp Asn Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Ala
260    265    270
Asp Pro Ser Pro Asn Cys His Ile Tyr Ser Ala Lys Asp Ala Lys Leu
275    280    285

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Thr	Leu	Cys	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Gly	Thr	Val	Ser
290						295					300				
Leu	Leu	Ala	Val	Ser	Gly	Ser	Leu	Ala	Pro	Ile	Thr	Gly	Ala	Val	Arg
305					310					315					320
Thr	Ala	Leu	Val	Ser	Leu	Lys	Phe	Asn	Ala	Asn	Gly	Ala	Leu	Leu	Asp
				325					330						335
Lys	Ser	Thr	Leu	Asn	Lys	Glu	Tyr	Trp	Asn	Tyr	Arg	Gln	Gly	Asp	Leu
			340					345					350		
Ile	Pro	Gly	Thr	Pro	Tyr	Thr	His	Ala	Val	Gly	Phe	Met	Pro	Asn	Lys
		355					360					365			
Lys	Ala	Tyr	Pro	Lys	Asn	Thr	Thr	Ala	Ala	Ser	Lys	Ser	His	Ile	Val
	370					375					380				
Gly	Asp	Val	Tyr	Leu	Asp	Gly	Asp	Ala	Asp	Lys	Pro	Leu	Ser	Leu	Ile
385					390					395					400
Ile	Thr	Phe	Asn	Glu	Thr	Asp	Asp	Glu	Thr	Cys	Asp	Tyr	Cys	Ile	Asn
			405					410						415	
Phe	Gln	Trp	Lys	Trp	Gly	Ala	Asp	Gln	Tyr	Lys	Asp	Lys	Thr	Leu	Ala
			420				425						430		
Thr	Ser	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu				
		435					440								

<210> 66
 <211> 1062
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 30 Fiber

<400> 66
 atggccaaac gagctcggct aagcagctcc ttcaatccgg tctaccctta tgaagatgaa 60
 agcagctcac aacaccctt tataaacctt gggtttcattt cctcaaattg ttttgcacaa 120
 agcccagatg gagttctaac tcttaaatgt gttaatccgc tcactaccgc cagcggaccc 180
 ctccaactta aagttggaag cagtcttaca gtagatacta tcgatggggtc tttggaggaa 240
 aatataactg ccgcagcgcc actcactaaa actaaccact ccatagggtt atcaatagga 300
 tctggcttgc aaacaaagga tgataaactt tgtttatcgc tgggagatgg gttggtaaca 360
 aaggatgata aactatgttt atcgctggga gatgggttaa taacaaaaga tgatacacta 420
 tgtgccaaac taggacatgg ccttggtgtt gactcttcca atgctatcac catagaaaac 480
 aacaccttgt ggacaggtgc aaaaccaagc gccaaactgtg taattaaaga gggagaagat 540
 tccccagact gtaagctcac tttagttcta gtgaagaatg gaggactgat aaatggatac 600
 ataacattaa tgggagcctc agaataact aacaccttgt ttaaaaacaa acaagttaca 660
 atcgatgtaa acctcgcat tgataatact ggccaaatta tcacttacct atcatccctt 720
 aaaagtaacc tgaactttta agacaaccaa aacatggcta ctggaaccat aaccagtgcc 780
 aaaggcttca tgcccagcac caccgcctat ccatttataa catacgccac tcagtcccta 840
 aatgaagatt acatttatgg agagtgttac tacaaatcta ccaatggaac tctctttcca 900
 ctaaaagtta ctgtcacact aaacagacgt atgtcagctt ctggaatggc ctatgctatg 960
 aatttttcat ggtctctaaa tgcagaggaa gccccggaaa ctaccgaagt cactctcatt 1020
 acctccccct tctttttttt ttatatcaga gaagatgact ga 1062

<210> 67
 <211> 353
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 30 Fiber

<400> 67
 Met Ala Lys Arg Ala Arg Leu Ser Ser Ser Phe Asn Pro Val Tyr Pro
 1 5 10 15

Tyr	Glu	Asp	Glu	Ser	Ser	Ser	Gln	His	Pro	Phe	Ile	Asn	Pro	Gly	Phe	
			20					25					30			
Ile	Ser	Ser	Asn	Gly	Phe	Ala	Gln	Ser	Pro	Asp	Gly	Val	Leu	Thr	Leu	
		35					40					45				
Lys	Cys	Val	Asn	Pro	Leu	Thr	Ala	Ser	Gly	Pro	Leu	Gln	Leu	Lys		
	50					55				60						
Val	Gly	Ser	Ser	Leu	Thr	Val	Asp	Thr	Ile	Asp	Gly	Ser	Leu	Glu	Glu	
65					70					75					80	
Asn	Ile	Thr	Ala	Ala	Ala	Pro	Leu	Thr	Lys	Thr	Asn	His	Ser	Ile	Gly	
				85					90					95		
Leu	Ser	Ile	Gly	Ser	Gly	Leu	Gln	Thr	Lys	Asp	Asp	Lys	Leu	Cys	Leu	
			100					105					110			
Ser	Leu	Gly	Asp	Gly	Leu	Val	Thr	Lys	Asp	Asp	Lys	Leu	Cys	Leu	Ser	
		115					120					125				
Leu	Gly	Asp	Gly	Leu	Ile	Thr	Lys	Asp	Asp	Thr	Leu	Cys	Ala	Lys	Leu	
	130					135					140					
Gly	His	Gly	Leu	Val	Phe	Asp	Ser	Ser	Asn	Ala	Ile	Thr	Ile	Glu	Asn	
145					150					155					160	
Asn	Thr	Leu	Trp	Thr	Gly	Ala	Lys	Pro	Ser	Ala	Asn	Cys	Val	Ile	Lys	
				165					170					175		
Glu	Gly	Glu	Asp	Ser	Pro	Asp	Cys	Lys	Leu	Thr	Leu	Val	Leu	Val	Lys	
		180						185				190				
Asn	Gly	Gly	Leu	Ile	Asn	Gly	Tyr	Ile	Thr	Leu	Met	Gly	Ala	Ser	Glu	
		195					200					205				
Tyr	Thr	Asn	Thr	Leu	Phe	Lys	Asn	Lys	Gln	Val	Thr	Ile	Asp	Val	Asn	
	210					215					220					
Leu	Ala	Phe	Asp	Asn	Thr	Gly	Gln	Ile	Ile	Thr	Tyr	Leu	Ser	Ser	Leu	
225					230					235					240	
Lys	Ser	Asn	Leu	Asn	Phe	Lys	Asp	Asn	Gln	Asn	Met	Ala	Thr	Gly	Thr	
			245						250					255		
Ile	Thr	Ser	Ala	Lys	Gly	Phe	Met	Pro	Ser	Thr	Thr	Ala	Tyr	Pro	Phe	
		260						265					270			
Ile	Thr	Tyr	Ala	Thr	Gln	Ser	Leu	Asn	Glu	Asp	Tyr	Ile	Tyr	Gly	Glu	
		275					280					285				
Cys	Tyr	Tyr	Lys	Ser	Thr	Asn	Gly	Thr	Leu	Phe	Pro	Leu	Lys	Val	Thr	
	290					295					300					
Val	Thr	Leu	Asn	Arg	Arg	Met	Ser	Ala	Ser	Gly	Met	Ala	Tyr	Ala	Met	
305					310					315					320	
Asn	Phe	Ser	Trp	Ser	Leu	Asn	Ala	Glu	Glu	Ala	Pro	Glu	Thr	Thr	Glu	
			325						330					335		
Val	Thr	Leu	Ile	Thr	Ser	Pro	Phe	Phe	Phe	Ser	Tyr	Ile	Arg	Glu	Asp	
			340					345					350			

Asp

<210> 68
 <211> 1791
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 31 Fiber

<400> 68
 atgtcagatt cttgctcctg tccctccgca cccactatct tcatgttggt gcagatgaag 60
 cgcacaaaaa cgtctgacga gagcttcaac cccgtgtacc cctatgacac ggaaagcggc 120
 cctccctccg tcccttttct caccctctcc ttcgtgtctc cccgatggatt ccaagaaagt 180

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ccccccgggg tccgtgtctct gaacctggcc gagcccctgg tcacttccca cggcatgctc 240
gccctgaaaa tgggaagtgg cctctccctg gacgacgtg gcaacctcac ctctcaagat 300
atcaccaccg ctagccctcc cctcaaaaaa accaagacca acctcagcct agaaacctca 360
tcccccttaa ctgtgagcac ctcaggcgcc ctcaccgtag cagccgcgcg tcccctggcg 420
gtggccggca cctccctcac catgcaatca gaggccccc tgacagtaca ggatgcaaaa 480
ctcaccctgg ccaccaaagg cccctgacc gtgtctgaag gcaaactggc cttgcaaaaca 540
tcggcccccgc tgacggccgc tgacagcagc accctcacag tcagtgccac accaccctt 600
agcacaagca atggcagctt ggggtattgac atgcaagccc ccatttacac caccaatgga 660
aaactaggac ttaacttttg cgctcccctg catgtggtag acagcctaaa tgcactgact 720
gtagttactg gccaaaggtct tacgataaac ggaacagccc taaaaactag agtctcaggt 780
gccctcaact atgacacatc aggaaccta gaattgagag ctgcaggggg tatgcgagtt 840
gatgcaaatg gtcaacttat ccttgatgta gcttaccat ttgatgcaca aaacaatctc 900
agccttaggc ttggacaggg acccctgttt gttaactctg cccacaactt ggatgttaac 960
tacaacagag gcctctacct gttcacatct ggaatatcca aaaagctaga agttaatatc 1020
aaaacagcca aggggtctcat ttatgatgac actgctatag caatcaatgc gggatgagg 1080
ctacagtttg actcaggctc agatacaaat ccataaaaaa ctaaacttgg attaggactg 1140
gattatgact ccagcagagc cataattgct aaactgggaa ctggcctaag ctttgacaac 1200
acaggtgcca tcacagtagg caacaaaaat gatgacaagc ttaccttggt gaccacacca 1260
gacccatccc ctaactgtag aatctattca gagaaagatg ctaaattcac acttgttttg 1320
actaaatgcg gcagtcaggt gttggccagc gtttctgttt tatctgtaaa aggtagcctt 1380
gcgccccatc gtggcacagt aactagtgtc cagattgtcc tcagatttga tgaaaatgga 1440
gttctactaa gcaattcttc ccttgaccct caatactgga actacagaaa aggtgacctt 1500
acagagggca ctgcatatac caacgcagtg ggatttatgc ccaacctcac agcatacca 1560
aaaacacaga gccaaactgc taaaagcaac attgtaagtc aggtttactt gaatggggac 1620
aatccaaac ccatgaccct caccattacc ctcaatggaa ctaatgaaac aggagatgcc 1680
acagtaagca cttactccat gtcattctca tggaactgga atggaagtaa ttacattaat 1740
gaaacgttcc aaaccaactc cttcaccttc tcctacatcg cccaagaata a 1791

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<210> 69

<211> 578

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 31 Fiber

<400> 69

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Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro
1          5          10          15
Tyr Asp Thr Glu Ser Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20          25          30
Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35          40          45
Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50          55          60
Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65          70          75          80
Gln Asp Ile Thr Thr Ala Ser Pro Pro Leu Lys Lys Thr Lys Thr Asn
85          90          95
Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val Ser Thr Ser Gly Ala
100         105         110
Leu Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115         120         125
Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
130         135         140
Leu Ala Thr Lys Gly Pro Leu Thr Val Ser Glu Gly Lys Leu Ala Leu
145         150         155         160
Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val

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<210> 70
 <211> 978
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 37 Fiber

<400> 70
 atggccaaac gggctcgtct aagcagctcc ttcaaccggg tgtacccta tgaagacgag 60
 agcagctcac aacacccatt tataaacccc ggcttcattt cccctgatgg ctttacacaa 120
 agcccagacg gagttctaac actgaaatgt gtttcccctc ttactaccac cagtggcgct 180
 ctagacatta aagtgggaag agggcttaaa gtagatagca ctgatgggtc cctggaagaa 240
 aatatagaca ttacagctcc cctcactaaa ttaaccact cagtaggatt agcatttggc 300
 gacggctctag aaacaaaaga aaacaagctt tatgtaaaac ttggagatgg acttaaattt 360
 agctctggca gtatatacat tgaccatgat gttaacactt tatggacagg agtcaatcca 420
 agtgctaact gtataattac agacaatgga gaaaccaatg acagcaagct taccctaata 480
 cttgttaagt caggtggatt aataaatgct tatgtctcat taatgggtga ctcagacaca 540
 gtcaataaat taaccacaga aaaaagtgtt caaattaccg ttgacatata ctttgataat 600
 caaggaaaag ttcttactga actatcggcc cttaaaacag atcttaaaca taaatttggg 660
 caaaacatgg cttctagcga agtatcaaac tgcaaaggct ttatgccaaag cttaaatgca 720
 taccatttca gaaatccaac taaacctacc aaaggaagag aagactacat ttatggaata 780
 acttactatc aagccacaga tggtaatctc tatgagctaa aaactactat tactctaaac 840
 cacagtgtca ttagttctct atgtgcatat gcaatgcaca tttcatgggtc atgggacacc 900
 gtaacagagc cagagacaac acccactact cttattacct ccccttctc cttttcctat 960
 atcagagaag atgactga 978

<210> 71
 <211> 325
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 37 Fiber

<400> 71
 Met Ala Lys Arg Ala Arg Leu Ser Ser Ser Phe Asn Pro Val Tyr Pro
 1 5 10 15
 Tyr Glu Asp Glu Ser Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe
 20 25 30
 Ile Ser Pro Asp Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu
 35 40 45
 Lys Cys Val Ser Pro Leu Thr Thr Thr Ser Gly Ala Leu Asp Ile Lys
 50 55 60
 Val Gly Arg Gly Leu Lys Val Asp Ser Thr Asp Gly Ser Leu Glu Glu
 65 70 75 80
 Asn Ile Asp Ile Thr Ala Pro Leu Thr Lys Phe Asn His Ser Val Gly
 85 90 95
 Leu Ala Phe Gly Asp Gly Leu Glu Thr Lys Glu Asn Lys Leu Tyr Val
 100 105 110
 Lys Leu Gly Asp Gly Leu Lys Phe Ser Ser Gly Ser Ile Tyr Ile Asp
 115 120 125
 His Asp Val Asn Thr Leu Trp Thr Gly Val Asn Pro Ser Ala Asn Cys
 130 135 140
 Ile Ile Thr Asp Asn Gly Glu Thr Asn Asp Ser Lys Leu Thr Leu Ile
 145 150 155 160
 Leu Val Lys Ser Gly Gly Leu Ile Asn Ala Tyr Val Ser Leu Met Gly
 165 170 175
 Asp Ser Asp Thr Val Asn Lys Leu Thr Thr Glu Lys Ser Ala Gln Ile
 180 185 190
 Thr Val Asp Ile Tyr Phe Asp Asn Gln Gly Lys Val Leu Thr Glu Leu

	195		200		205										
Ser	Ala	Leu	Lys	Thr	Asp	Leu	Lys	His	Lys	Phe	Gly	Gln	Asn	Met	Ala
	210					215					220				
Ser	Ser	Glu	Val	Ser	Asn	Cys	Lys	Gly	Phe	Met	Pro	Ser	Leu	Asn	Ala
225					230					235					240
Tyr	Pro	Phe	Arg	Asn	Pro	Thr	Lys	Pro	Thr	Lys	Gly	Arg	Glu	Asp	Tyr
				245					250					255	
Ile	Tyr	Gly	Ile	Thr	Tyr	Tyr	Gln	Ala	Thr	Asp	Gly	Asn	Leu	Tyr	Glu
			260					265					270		
Leu	Lys	Thr	Thr	Ile	Thr	Leu	Asn	His	Ser	Val	Ile	Ser	Ser	Leu	Cys
		275					280					285			
Ala	Tyr	Ala	Met	His	Ile	Ser	Trp	Ser	Trp	Asp	Thr	Val	Thr	Glu	Pro
	290					295					300				
Glu	Thr	Thr	Pro	Thr	Thr	Leu	Ile	Thr	Ser	Pro	Phe	Ser	Phe	Ser	Tyr
305					310					315					320
Ile	Arg	Glu	Asp	Asp											
				325											

<210> 72
 <211> 1332
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 38 Fiber

<400> 72
 atgtccaaaa agcgcgtccg ggtggatgat gacttcgacc ccgtctaccc ctacgatgca 60
 gacaacgcac cgaccgtgcc cttcatcaac ccccccttcg tctcttcaga tggattccaa 120
 gagaagcccc tgggggtggt gtccctgcga ctggccgacc ccgtcaccac caagaacggg 180
 gaaatcaccc tcaagctggg agaggggggtg gacctcgact cctcgggaaa actcatctcc 240
 aacacggcca ccaaggccgc cgccccctctc agttttttcca acaacaccat ttcccttaac 300
 atggataccc cttttttatcac caaagatgga aaattatcct tacaagtttc tccaccatta 360
 aacatattaa aatcaaccat tctgaacaca ttagctgtag cttatggatc aggttttagga 420
 ctcatgtgtg gcaactgctct tgcagtagag ttggcctctc cactcacctt tgatgaaaaa 480
 ggaaatatta aaattaacct agccagtggg ccattaacag ttgatgcaag tcgacttagt 540
 atcaactgca aaagaggggt cactgtcact accgcaggag atgcaattaa aagcaacata 600
 agctggccta aaggtataag atttgaaggt gatgccatag ctgcaaacaat tggcagagga 660
 ttggaatttg gaaccactag tacagagact gatgtcacag atgcataccc aattcaagtt 720
 aaattgggta ctgggtctcac ctttgacagt acaggcgcca ttgtttgcatg gaacaaagag 780
 gatgataaac ttacattatg gaccacagcc gaccctctgc caaattgcaa aatatactct 840
 gaaaaagatg ctaaactcac acttttgctg acaaaatgtg gaagccaaat tctgggcact 900
 gtgactgtat tggcagtga taatggaagt ctcaacccaa tcacaaacac agtaagcact 960
 gcacttgtct ccctcaagtt tgatgcaagt ggagttttgc taagcagctc cacattagac 1020
 aaagaatatt ggaacttccg aaaggagat gttacacctg ctgaacccta tactaatgct 1080
 ataggtttta tgcctaacat aaaggcctat cctaaaaaca catctgcagc ttcaaaaagc 1140
 catattgtca gtcaagttta tctcaatggg gatgaaacca aacctctgat gctgattatt 1200
 acttttaatg aaactgagga tgcaacttgc acctatagta tcacttttca atggaaatgg 1260
 gatagtacta agtacacagg taaaacactt gctaccagct ccttcacctt ctctacatt 1320
 gctcaagaat ga 1332

<210> 73
 <211> 443
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 38 Fiber

<400> 73

Met	Ser	Lys	Lys	Arg	Val	Arg	Val	Asp	Asp	Asp	Phe	Asp	Pro	Val	Tyr
1				5				10						15	
Pro	Tyr	Asp	Ala	Asp	Asn	Ala	Pro	Thr	Val	Pro	Phe	Ile	Asn	Pro	Pro
		20						25					30		
Phe	Val	Ser	Ser	Asp	Gly	Phe	Gln	Glu	Lys	Pro	Leu	Gly	Val	Leu	Ser
	35						40					45			
Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Glu	Ile	Thr	Leu
	50					55					60				
Lys	Leu	Gly	Glu	Gly	Val	Asp	Leu	Asp	Ser	Ser	Gly	Lys	Leu	Ile	Ser
65					70					75					80
Asn	Thr	Ala	Thr	Lys	Ala	Ala	Ala	Pro	Leu	Ser	Phe	Ser	Asn	Asn	Thr
				85					90					95	
Ile	Ser	Leu	Asn	Met	Asp	Thr	Pro	Phe	Tyr	Thr	Lys	Asp	Gly	Lys	Leu
			100					105					110		
Ser	Leu	Gln	Val	Ser	Pro	Pro	Leu	Asn	Ile	Leu	Lys	Ser	Thr	Ile	Leu
		115					120					125			
Asn	Thr	Leu	Ala	Val	Ala	Tyr	Gly	Ser	Gly	Leu	Gly	Leu	Ser	Gly	Gly
	130					135					140				
Thr	Ala	Leu	Ala	Val	Gln	Leu	Ala	Ser	Pro	Leu	Thr	Phe	Asp	Glu	Lys
145					150					155					160
Gly	Asn	Ile	Lys	Ile	Asn	Leu	Ala	Ser	Gly	Pro	Leu	Thr	Val	Asp	Ala
				165					170					175	
Ser	Arg	Leu	Ser	Ile	Asn	Cys	Lys	Arg	Gly	Val	Thr	Val	Thr	Thr	Ala
		180						185					190		
Gly	Asp	Ala	Ile	Lys	Ser	Asn	Ile	Ser	Trp	Pro	Lys	Gly	Ile	Arg	Phe
	195					200						205			
Glu	Gly	Asp	Ala	Ile	Ala	Ala	Asn	Ile	Gly	Arg	Gly	Leu	Glu	Phe	Gly
	210					215					220				
Thr	Thr	Ser	Thr	Glu	Thr	Asp	Val	Thr	Asp	Ala	Tyr	Pro	Ile	Gln	Val
225					230					235					240
Lys	Leu	Gly	Thr	Gly	Leu	Thr	Phe	Asp	Ser	Thr	Gly	Ala	Ile	Val	Ala
				245					250					255	
Trp	Asn	Lys	Glu	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Ala	Asp	Pro
		260						265					270		
Ser	Pro	Asn	Cys	Lys	Ile	Tyr	Ser	Glu	Lys	Asp	Ala	Lys	Leu	Thr	Leu
		275					280					285			
Cys	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Gly	Thr	Val	Thr	Val	Leu
	290					295					300				
Ala	Val	Asn	Asn	Gly	Ser	Leu	Asn	Pro	Ile	Thr	Asn	Thr	Val	Ser	Thr
305					310					315					320
Ala	Leu	Val	Ser	Leu	Lys	Phe	Asp	Ala	Ser	Gly	Val	Leu	Leu	Ser	Ser
				325					330					335	
Ser	Thr	Leu	Asp	Lys	Glu	Tyr	Trp	Asn	Phe	Arg	Lys	Gly	Asp	Val	Thr
			340					345					350		
Pro	Ala	Glu	Pro	Tyr	Thr	Asn	Ala	Ile	Gly	Phe	Met	Pro	Asn	Ile	Lys
		355					360					365			
Ala	Tyr	Pro	Lys	Asn	Thr	Ser	Ala	Ala	Ser	Lys	Ser	His	Ile	Val	Ser
	370					375					380				
Gln	Val	Tyr	Leu	Asn	Gly	Asp	Glu	Thr	Lys	Pro	Leu	Met	Leu	Ile	Ile
385					390					395					400
Thr	Phe	Asn	Glu	Thr	Glu	Asp	Ala	Thr	Cys	Thr	Tyr	Ser	Ile	Thr	Phe
				405					410					415	
Gln	Trp	Lys	Trp	Asp	Ser	Thr	Lys	Tyr	Thr	Gly	Lys	Thr	Leu	Ala	Thr
			420					425					430		
Ser	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu					

435

440

<210> 74
 <211> 1332
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 44 Fiber

<400> 74
 atgtccaaaa agcgcgtccg ggtggatgat gacttcgacc ccgtctaccc ctacgatgca 60
 gacaacgcac cgaccgtgcc cttcatcaac ccccccttcg tctcttcaga tggattccaa 120
 gagaagcccc tgggggtggt gtccctgcga ctggctgacc ccgtcaccac caagaacggg 180
 gaaatcacc tcaagctggg agagggggtg gacctcgact cgtcgggaaa actcatctcc 240
 aacacggcca ccaaggccgc cgccctctc agtatttcaa acaacacccat ttcccttaaa 300
 actgctgccc ctttctacaa caacaatgga actttaagcc tcaatgtctc cacaccatta 360
 gcagtatttc ccacatttaa cactttaggc ataagtcttg gaaacgggtc tcagacttca 420
 aataagttgt tgactgtaca actaactcat cctcttacat tcagctcaaa tagcatcaca 480
 gtaaaaacag acaaagggct atatattaac tccagtggaa acagaggact tgaggctaata 540
 ataagcctaa aaagaggact agtttttgac ggtaattgcta ttgcaacata tattggaaat 600
 ggcttagact atggatctta tgatagtgtat ggaaaaacaa gacccgtaata taccaaaatt 660
 ggagcaggat taaattttga tgctaacaaa gcaatagctg tcaaactagg cacaggttta 720
 agttttgact ccgctgggtgc cttgacagct ggaaacaaac aggatgacaa gctaacactt 780
 tggactaccc ctgaccceaag ccctaattgt caattacttt cagacagaga tgccaaattt 840
 actctctgtc ttacaaaatg cggtagtcaa atactaggca ctgtggcagt ggcggctgtt 900
 actgtaggat cagcactaaa tccaattaat gacacagtca aaagcgccat agttttcctt 960
 agatttgatt ccgatgggtg actcatgtca aactcatcaa tggtaggtga ttactggaac 1020
 tttagggagg gacagaccac tcaaagtgtg gcctatacaa atgctgtggg attcatgcca 1080
 aatataggtg catatccaaa aacccaaagt aaaacaccta aaaatagcat agtcagtcag 1140
 gtatatttta ctggagaaac tactatgcca atgacactaa ccataacttt caatggcact 1200
 gatgaaaaag acacaacccc agttagcacc tactctatga cttttacatg gcagtggact 1260
 ggagactata aggacaaaaa tattaccttt gctaccaact cattctcttt ttccctacac 1320
 gccaggaat aa 1332

<210> 75
 <211> 443
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 44 Fiber

<400> 75
 Met Ser Lys Lys Arg Val Arg Val Asp Asp Asp Phe Asp Pro Val Tyr
 1 5 10 15
 Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
 20 25 30
 Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
 35 40 45
 Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
 50 55 60
 Lys Leu Gly Glu Gly Val Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser
 65 70 75 80
 Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Ile Ser Asn Asn Thr
 85 90 95
 Ile Ser Leu Lys Thr Ala Ala Pro Phe Tyr Asn Asn Asn Gly Thr Leu
 100 105 110
 Ser Leu Asn Val Ser Thr Pro Leu Ala Val Phe Pro Thr Phe Asn Thr
 115 120 125

Leu	Gly	Ile	Ser	Leu	Gly	Asn	Gly	Leu	Gln	Thr	Ser	Asn	Lys	Leu	Leu
130						135					140				
Thr	Val	Gln	Leu	Thr	His	Pro	Leu	Thr	Phe	Ser	Ser	Asn	Ser	Ile	Thr
145					150					155					160
Val	Lys	Thr	Asp	Lys	Gly	Leu	Tyr	Ile	Asn	Ser	Ser	Gly	Asn	Arg	Gly
				165					170					175	
Leu	Glu	Ala	Asn	Ile	Ser	Leu	Lys	Arg	Gly	Leu	Val	Phe	Asp	Gly	Asn
			180					185					190		
Ala	Ile	Ala	Thr	Tyr	Ile	Gly	Asn	Gly	Leu	Asp	Tyr	Gly	Ser	Tyr	Asp
	195					200						205			
Ser	Asp	Gly	Lys	Thr	Arg	Pro	Val	Ile	Thr	Lys	Ile	Gly	Ala	Gly	Leu
	210					215					220				
Asn	Phe	Asp	Ala	Asn	Lys	Ala	Ile	Ala	Val	Lys	Leu	Gly	Thr	Gly	Leu
225					230					235					240
Ser	Phe	Asp	Ser	Ala	Gly	Ala	Leu	Thr	Ala	Gly	Asn	Lys	Gln	Asp	Asp
				245					250					255	
Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro	Ser	Pro	Asn	Cys	Gln	Leu
			260					265					270		
Leu	Ser	Asp	Arg	Asp	Ala	Lys	Phe	Thr	Leu	Cys	Leu	Thr	Lys	Cys	Gly
		275					280					285			
Ser	Gln	Ile	Leu	Gly	Thr	Val	Ala	Val	Ala	Ala	Val	Thr	Val	Gly	Ser
	290					295					300				
Ala	Leu	Asn	Pro	Ile	Asn	Asp	Thr	Val	Lys	Ser	Ala	Ile	Val	Phe	Leu
305					310					315					320
Arg	Phe	Asp	Ser	Asp	Gly	Val	Leu	Met	Ser	Asn	Ser	Ser	Met	Val	Gly
				325					330					335	
Asp	Tyr	Trp	Asn	Phe	Arg	Glu	Gly	Gln	Thr	Thr	Gln	Ser	Val	Ala	Tyr
			340					345					350		
Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Ile	Gly	Ala	Tyr	Pro	Lys	Thr
		355					360					365			
Gln	Ser	Lys	Thr	Pro	Lys	Asn	Ser	Ile	Val	Ser	Gln	Val	Tyr	Leu	Thr
	370					375					380				
Gly	Glu	Thr	Thr	Met	Pro	Met	Thr	Leu	Thr	Ile	Thr	Phe	Asn	Gly	Thr
385					390					395					400
Asp	Glu	Lys	Asp	Thr	Thr	Pro	Val	Ser	Thr	Tyr	Ser	Met	Thr	Phe	Thr
				405					410					415	
Trp	Gln	Trp	Thr	Gly	Asp	Tyr	Lys	Asp	Lys	Asn	Ile	Thr	Phe	Ala	Thr
			420					425					430		
Asn	Ser	Phe	Ser	Phe	Ser	Tyr	Ile	Ala	Gln	Glu					
	435						440								

<210> 76
 <211> 1278
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 63 Fiber

<400> 76
 atgtccaaaa agcgcgtccg ggtggatgat gacttcgacc ccgtctaccc ctacgatgca 60
 gacaacgcac cgaccgtgcc cttcatcaac ccccccttcg tctcttcaga tggattccaa 120
 gagaagcccc tgggggtgct gtccctgcga ctggccgacc ccgtcaccac caagaacggg 180
 gaaatcacc tcaagctggg agagggggtg gacctcgact cctcgggaaa actcatctcc 240
 aacacggcca ccaaggccgc cgcccctctc agtttttcca acaacaccat ttcccttaac 300
 atggatcacc cctttttacac taaagatgga aaattatcct tacaagtttc tccaccatta 360
 aatatactga gaacaagcat tctaaacaca ctagcttttag gttttggatc aggttttaga 420

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ctccgtggct ctgccttggc agtacagtta gtctctccac ttacatttga tactgatgga 480
aacataaagc ttaccttaga cagaggtttg catgttacia caggagatgc aattgaaagc 540
aacataagct gggctaaagg tttaaaattt gaagatggag ccatagcaac caacattgga 600
aatgggttag agtttggag cagtagtaca gaaacagggtg ttgatgatgc ttaccaatc 660
caagttaaac ttggatctgg ccttagcttt gacagtacag gagccataat ggctggtaac 720
aaagaagacg ataaactcac tttgtggaca acacctgac catcgccaaa ctgtcaaata 780
ctcgcagaaa atgatgcaaa actaacactt tgcttgacta aatgtggtag tcaaatactg 840
gccactgtgt cagtcttagt ttaggaagt ggaaacctaa accccattac tggcaccgta 900
agcagtgtc aggtgtttct acgttttgat gcaaacgggtg ttcttttaac agaacttct 960
acactaaaaa aatactgggg gtataggcag ggagatagca tagatggcac tccatatacc 1020
aatgctgtag gattcatgcc caatttaaaa gcttatccaa agtcacaaaag ttctactact 1080
aaaaataata tagtagggca agtatacatg aatggagatg tttcaaaacc tatgcttctc 1140
actataaccc tcaatgttac tgatgacagc aacagtacat attcaatgtc attttcatac 1200
acctggacta atggaagcta tgttgagca acatttgggg ctaactctta taccttctca 1260
tacatcgccc aagaatga 1278

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<210> 77

<211> 425

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 63 Fiber

<400> 77

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Met Ser Lys Lys Arg Val Arg Val Asp Asp Asp Phe Asp Pro Val Tyr
1          5          10          15
Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
20          25          30
Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
35          40          45
Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
50          55          60
Lys Leu Gly Glu Gly Val Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser
65          70          75          80
Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr
85          90          95
Ile Ser Leu Asn Met Asp His Pro Phe Tyr Thr Lys Asp Gly Lys Leu
100          105          110
Ser Leu Gln Val Ser Pro Pro Leu Asn Ile Leu Arg Thr Ser Ile Leu
115          120          125
Asn Thr Leu Ala Leu Gly Phe Gly Ser Gly Leu Gly Leu Arg Gly Ser
130          135          140
Ala Leu Ala Val Gln Leu Val Ser Pro Leu Thr Phe Asp Thr Asp Gly
145          150          155          160
Asn Ile Lys Leu Thr Leu Asp Arg Gly Leu His Val Thr Thr Gly Asp
165          170          175
Ala Ile Glu Ser Asn Ile Ser Trp Ala Lys Gly Leu Lys Phe Glu Asp
180          185          190
Gly Ala Ile Ala Thr Asn Ile Gly Asn Gly Leu Glu Phe Gly Ser Ser
195          200          205
Ser Thr Glu Thr Gly Val Asp Asp Ala Tyr Pro Ile Gln Val Lys Leu
210          215          220
Gly Ser Gly Leu Ser Phe Asp Ser Thr Gly Ala Ile Met Ala Gly Asn
225          230          235          240
Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro
245          250          255
Asn Cys Gln Ile Leu Ala Glu Asn Asp Ala Lys Leu Thr Leu Cys Leu

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<212> PRT

<213> Chimpanzee Adenovirus- ChAd 82 Fiber

<400> 79

Met	Ser	Lys	Lys	Arg	Ala	Arg	Val	Asp	Asp	Asp	Phe	Asp	Pro	Val	Tyr
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Pro	Tyr	Asp	Ala	Asp	Asn	Ala	Pro	Thr	Val	Pro	Phe	Ile	Asn	Pro	Pro
			20					25					30		
Phe	Val	Ser	Ser	Asp	Gly	Phe	Gln	Glu	Lys	Pro	Leu	Gly	Val	Leu	Ser
		35					40					45			
Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Ala	Val	Thr	Leu
	50					55					60				
Lys	Leu	Gly	Glu	Gly	Val	Asp	Leu	Asp	Asp	Ser	Gly	Lys	Leu	Ile	Ser
65					70					75					80
Lys	Asn	Ala	Thr	Lys	Ala	Thr	Ala	Pro	Leu	Ser	Ile	Ser	Asn	Asn	Thr
				85					90					95	
Ile	Ser	Leu	Asn	Met	Asp	Thr	Pro	Leu	Tyr	Asn	Asn	Asn	Gly	Lys	Leu
			100					105					110		
Gly	Met	Lys	Val	Thr	Ala	Pro	Leu	Lys	Ile	Leu	Asp	Thr	Asp	Leu	Leu
		115					120					125			
Lys	Thr	Leu	Val	Val	Ala	Tyr	Gly	Gln	Gly	Leu	Gly	Thr	Asn	Thr	Asn
	130					135					140				
Gly	Ala	Leu	Val	Ala	Gln	Leu	Ala	Tyr	Pro	Leu	Val	Phe	Asn	Thr	Ala
145					150					155					160
Ser	Lys	Ile	Ala	Leu	Asn	Leu	Gly	Asn	Gly	Pro	Leu	Lys	Val	Asp	Ala
				165					170					175	
Asn	Arg	Leu	Asn	Ile	Asn	Cys	Lys	Arg	Gly	Ile	Tyr	Val	Thr	Thr	Thr
			180					185					190		
Lys	Asp	Ala	Leu	Glu	Ile	Asn	Ile	Ser	Trp	Ala	Asn	Ala	Met	Thr	Phe
		195					200					205			
Ile	Gly	Asn	Ala	Ile	Gly	Val	Asn	Ile	Asp	Thr	Lys	Lys	Gly	Leu	Gln
	210					215					220				
Phe	Gly	Thr	Ser	Ser	Thr	Glu	Thr	Asp	Val	Lys	Asn	Ala	Phe	Pro	Leu
225					230					235					240
Gln	Val	Lys	Leu	Gly	Ala	Gly	Leu	Thr	Phe	Asp	Ser	Thr	Gly	Ala	Ile
				245					250					255	
Val	Ala	Trp	Asn	Lys	Glu	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Ala
			260					265					270		
Asp	Pro	Ser	Pro	Asn	Cys	His	Ile	Tyr	Ser	Ala	Lys	Asp	Ala	Lys	Leu
		275					280					285			
Thr	Leu	Cys	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Gly	Thr	Val	Ser
	290					295					300				
Leu	Ile	Ala	Val	Asp	Thr	Gly	Ser	Leu	Asn	Pro	Ile	Thr	Gly	Lys	Val
305					310					315					320
Thr	Thr	Ala	Leu	Val	Ser	Leu	Lys	Phe	Asp	Ala	Asn	Gly	Val	Leu	Gln
				325					330					335	
Ala	Ser	Ser	Thr	Leu	Asp	Lys	Glu	Tyr	Trp	Asn	Phe	Arg	Lys	Gly	Asp
			340					345					350		
Val	Thr	Pro	Ala	Asp	Pro	Tyr	Thr	Asn	Ala	Ile	Gly	Phe	Met	Pro	Asn
		355					360					365			
Leu	Asn	Ala	Tyr	Pro	Lys	Asn	Thr	Asn	Ala	Ala	Ala	Lys	Ser	His	Ile
	370					375					380				
Val	Gly	Lys	Val	Tyr	Leu	His	Gly	Asp	Val	Ser	Lys	Pro	Leu	Asp	Leu
385					390				395						400
Ile	Ile	Thr	Phe	Asn	Glu	Thr	Ser	Asp	Glu	Ser	Cys	Thr	Tyr	Cys	Ile

				405					410					415			
Asn	Phe	Gln	Trp	Arg	Trp	Gly	Thr	Asp	Gln	Tyr	Lys	Asp	Glu	Thr	Leu		
			420					425					430				
Ala	Val	Ser	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Lys	Glu					
		435					440					445					

<210> 80
 <211> 445
 <212> PRT
 <213> Chimpanzee Adenovirus- CV23/Pan5 Fiber

<400> 80

Met	Ser	Lys	Lys	Arg	Val	Arg	Val	Asp	Asp	Asp	Phe	Asp	Pro	Val	Tyr		
1				5				10						15			
Pro	Tyr	Asp	Ala	Asp	Asn	Ala	Pro	Thr	Val	Pro	Phe	Ile	Asn	Pro	Pro		
			20					25					30				
Phe	Val	Ser	Ser	Asp	Gly	Phe	Gln	Glu	Lys	Pro	Leu	Gly	Val	Leu	Ser		
		35					40					45					
Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Glu	Ile	Thr	Leu		
	50					55					60						
Lys	Leu	Gly	Asp	Gly	Val	Asp	Leu	Asp	Ser	Ser	Gly	Lys	Leu	Ile	Ser		
65					70					75					80		
Asn	Thr	Ala	Thr	Lys	Ala	Ala	Ala	Pro	Leu	Ser	Phe	Ser	Asn	Asn	Thr		
				85				90						95			
Ile	Ser	Leu	Asn	Met	Asp	Thr	Pro	Phe	Tyr	Asn	Asn	Asn	Gly	Lys	Leu		
			100					105					110				
Gly	Met	Lys	Val	Thr	Ala	Pro	Leu	Lys	Ile	Leu	Asp	Thr	Asp	Leu	Leu		
	115						120					125					
Lys	Thr	Leu	Val	Val	Ala	Tyr	Gly	Gln	Gly	Leu	Gly	Thr	Asn	Thr	Thr		
	130						135				140						
Gly	Ala	Leu	Val	Ala	Gln	Leu	Ala	Ser	Pro	Leu	Ala	Phe	Asp	Ser	Asn		
145					150					155					160		
Ser	Lys	Ile	Ala	Leu	Asn	Leu	Gly	Asn	Gly	Pro	Leu	Lys	Val	Asp	Ala		
				165				170						175			
Asn	Arg	Leu	Asn	Ile	Asn	Cys	Asn	Arg	Gly	Leu	Tyr	Val	Thr	Thr	Thr		
			180					185					190				
Lys	Asp	Ala	Leu	Glu	Ala	Asn	Ile	Ser	Trp	Ala	Asn	Ala	Met	Thr	Phe		
	195						200					205					
Ile	Gly	Asn	Ala	Met	Gly	Val	Asn	Ile	Asp	Thr	Gln	Lys	Gly	Leu	Gln		
	210					215					220						
Phe	Gly	Thr	Thr	Ser	Thr	Val	Ala	Asp	Val	Lys	Asn	Ala	Tyr	Pro	Ile		
225					230					235					240		
Gln	Ile	Lys	Leu	Gly	Ala	Gly	Leu	Thr	Phe	Asp	Ser	Thr	Gly	Ala	Ile		
				245					250					255			
Val	Ala	Trp	Asn	Lys	Asp	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Ala		
			260					265					270				
Asp	Pro	Ser	Pro	Asn	Cys	His	Ile	Tyr	Ser	Glu	Lys	Asp	Ala	Lys	Leu		
		275					280					285					
Thr	Leu	Cys	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Gly	Thr	Val	Ser		
	290					295					300						
Leu	Ile	Ala	Val	Asp	Thr	Gly	Ser	Leu	Asn	Pro	Ile	Thr	Gly	Thr	Val		
305					310					315					320		
Thr	Thr	Ala	Leu	Val	Ser	Leu	Lys	Phe	Asp	Ala	Asn	Gly	Val	Leu	Gln		
				325					330					335			

Ser	Ser	Ser	Thr	Leu	Asp	Ser	Asp	Tyr	Trp	Asn	Phe	Arg	Gln	Gly	Asp
			340					345					350		
Val	Thr	Pro	Ala	Glu	Ala	Tyr	Thr	Asn	Ala	Ile	Gly	Phe	Met	Pro	Asn
		355						360				365			
Leu	Lys	Ala	Tyr	Pro	Lys	Asn	Thr	Ser	Gly	Ala	Ala	Lys	Ser	His	Ile
	370					375					380				
Val	Gly	Lys	Val	Tyr	Leu	His	Gly	Asp	Thr	Gly	Lys	Pro	Leu	Asp	Leu
385					390					395					400
Ile	Ile	Thr	Phe	Asn	Glu	Thr	Ser	Asp	Glu	Ser	Cys	Thr	Tyr	Cys	Ile
			405						410					415	
Asn	Phe	Gln	Trp	Gln	Trp	Gly	Ala	Asp	Gln	Tyr	Lys	Asn	Glu	Thr	Leu
		420						425					430		
Ala	Val	Ser	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Lys	Glu			
		435					440					445			

<210> 81
 <211> 443
 <212> PRT
 <213> Chimpanzee Adenovirus- CV32/Pan6 Fiber

<400> 81

Met	Ser	Lys	Lys	Arg	Val	Arg	Val	Asp	Asp	Asp	Phe	Asp	Pro	Val	Tyr
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Pro	Tyr	Asp	Ala	Asp	Asn	Ala	Pro	Thr	Val	Pro	Phe	Ile	Asn	Pro	Pro
			20					25					30		
Phe	Val	Ser	Ser	Asp	Gly	Phe	Gln	Glu	Lys	Pro	Leu	Gly	Val	Leu	Ser
	35					40						45			
Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Glu	Ile	Thr	Leu
	50					55					60				
Lys	Leu	Gly	Glu	Gly	Val	Asp	Leu	Asp	Ser	Ser	Gly	Lys	Leu	Ile	Ser
65				70					75					80	
Asn	Thr	Ala	Thr	Lys	Ala	Ala	Ala	Pro	Leu	Ser	Ile	Ser	Asn	Asn	Thr
			85					90						95	
Ile	Ser	Leu	Lys	Thr	Ala	Ala	Pro	Phe	Tyr	Asn	Asn	Asn	Gly	Thr	Leu
		100					105						110		
Ser	Leu	Asn	Val	Ser	Thr	Pro	Leu	Ala	Val	Phe	Pro	Thr	Phe	Asn	Thr
	115					120						125			
Leu	Gly	Ile	Ser	Leu	Gly	Asn	Gly	Leu	Gln	Thr	Ser	Asn	Lys	Leu	Leu
	130					135					140				
Thr	Val	Gln	Leu	Thr	His	Pro	Leu	Thr	Phe	Ser	Ser	Asn	Ser	Ile	Thr
145				150					155					160	
Val	Lys	Thr	Asp	Lys	Gly	Leu	Tyr	Ile	Asn	Ser	Ser	Gly	Asn	Arg	Gly
			165						170					175	
Leu	Glu	Ala	Asn	Ile	Ser	Leu	Lys	Arg	Gly	Leu	Val	Phe	Asp	Gly	Asn
		180						185					190		
Ala	Ile	Ala	Thr	Tyr	Ile	Gly	Asn	Gly	Leu	Asp	Tyr	Gly	Ser	Tyr	Asp
	195					200						205			
Ser	Asp	Gly	Lys	Thr	Arg	Pro	Val	Ile	Thr	Lys	Ile	Gly	Ala	Gly	Leu
	210				215						220				
Asn	Phe	Asp	Ala	Asn	Lys	Ala	Ile	Ala	Val	Lys	Leu	Gly	Thr	Gly	Leu
225				230						235				240	
Ser	Phe	Asp	Ser	Ala	Gly	Ala	Leu	Thr	Ala	Gly	Asn	Lys	Gln	Asp	Asp
			245						250					255	
Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro	Ser	Pro	Asn	Cys	Gln	Leu

Gly	Asp	Ala	Ile	Glu	Ser	Asn	Ile	Ser	Trp	Pro	Lys	Gly	Ile	Arg	Phe	
		195					200					205				
Glu	Gly	Asn	Gly	Ile	Ala	Ala	Asn	Ile	Gly	Arg	Gly	Leu	Glu	Phe	Gly	
		210					215					220				
Thr	Thr	Ser	Thr	Glu	Thr	Asp	Val	Thr	Asp	Ala	Tyr	Pro	Ile	Gln	Val	
225					230					235					240	
Lys	Leu	Gly	Thr	Gly	Leu	Thr	Phe	Asp	Ser	Thr	Gly	Ala	Ile	Val	Ala	
				245					250					255		
Trp	Asn	Lys	Glu	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Ala	Asp	Pro	
			260					265					270			
Ser	Pro	Asn	Cys	Lys	Ile	Tyr	Ser	Glu	Lys	Asp	Ala	Lys	Leu	Thr	Leu	
		275					280					285				
Cys	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Gly	Thr	Val	Thr	Val	Leu	
	290					295					300					
Ala	Val	Asn	Asn	Gly	Ser	Leu	Asn	Pro	Ile	Thr	Asn	Thr	Val	Ser	Thr	
305				310						315					320	
Ala	Leu	Val	Ser	Leu	Lys	Phe	Asp	Ala	Ser	Gly	Val	Leu	Leu	Ser	Ser	
				325					330					335		
Ser	Thr	Leu	Asp	Lys	Glu	Tyr	Trp	Asn	Phe	Arg	Lys	Gly	Asp	Val	Thr	
			340					345					350			
Pro	Ala	Glu	Pro	Tyr	Thr	Asn	Ala	Ile	Gly	Phe	Met	Pro	Asn	Ile	Lys	
		355					360					365				
Ala	Tyr	Pro	Lys	Asn	Thr	Ser	Ala	Ala	Ser	Lys	Ser	His	Ile	Val	Ser	
	370					375					380					
Gln	Val	Tyr	Leu	Asn	Gly	Asp	Glu	Ala	Lys	Pro	Leu	Met	Leu	Ile	Ile	
385				390						395					400	
Thr	Phe	Asn	Glu	Thr	Glu	Asp	Ala	Thr	Cys	Thr	Tyr	Ser	Ile	Thr	Phe	
			405						410					415		
Gln	Trp	Lys	Trp	Asp	Ser	Thr	Lys	Tyr	Thr	Gly	Glu	Thr	Leu	Ala	Thr	
			420					425					430			
Ser	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu						
		435					440									

<210> 83
 <211> 543
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 3 Fiber

<400> 83																
Met	Lys	Arg	Thr	Lys	Thr	Ser	Asp	Glu	Ser	Phe	Asn	Pro	Val	Tyr	Pro	
1				5					10					15		
Tyr	Asp	Thr	Glu	Ser	Gly	Pro	Pro	Ser	Val	Pro	Phe	Leu	Thr	Pro	Pro	
			20					25					30			
Phe	Val	Ser	Pro	Asp	Gly	Phe	Gln	Glu	Ser	Pro	Pro	Gly	Val	Leu	Ser	
		35				40						45				
Leu	Asn	Leu	Ala	Glu	Pro	Leu	Val	Thr	Ser	His	Gly	Met	Leu	Ala	Leu	
	50					55				60						
Lys	Met	Gly	Ser	Gly	Leu	Ser	Leu	Asp	Asp	Ala	Gly	Asn	Leu	Thr	Ser	
65				70						75					80	
Gln	Asp	Ile	Thr	Thr	Ala	Ser	Pro	Pro	Leu	Lys	Lys	Thr	Lys	Thr	Asn	
			85					90						95		
Leu	Ser	Leu	Glu	Thr	Ser	Ser	Pro	Leu	Thr	Val	Ser	Thr	Ser	Gly	Ala	
			100					105					110			
Leu	Thr	Val	Ala	Ala	Ala	Ala	Pro	Leu	Ala	Val	Ala	Gly	Thr	Ser	Leu	

		115				120				125					
Thr	Met	Gln	Ser	Glu	Ala	Pro	Leu	Thr	Val	Gln	Asp	Ala	Lys	Leu	Thr
	130					135					140				
Leu	Ala	Thr	Lys	Gly	Pro	Leu	Thr	Val	Ser	Glu	Gly	Lys	Leu	Ala	Leu
145					150					155					160
Gln	Thr	Ser	Ala	Pro	Leu	Thr	Ala	Ala	Asp	Ser	Ser	Thr	Leu	Thr	Val
				165					170						175
Ser	Ala	Thr	Pro	Pro	Ile	Asn	Val	Ser	Ser	Gly	Ser	Leu	Gly	Leu	Asp
			180					185					190		
Met	Glu	Asp	Pro	Met	Tyr	Thr	His	Asp	Gly	Lys	Leu	Gly	Ile	Arg	Ile
	195						200					205			
Gly	Gly	Pro	Leu	Arg	Val	Val	Asp	Ser	Leu	His	Thr	Leu	Thr	Val	Val
	210					215					220				
Thr	Gly	Asn	Gly	Leu	Thr	Val	Asp	Asn	Asn	Ala	Leu	Gln	Thr	Arg	Val
225					230					235					240
Thr	Gly	Ala	Leu	Gly	Tyr	Asp	Thr	Ser	Gly	Asn	Leu	Gln	Leu	Arg	Ala
				245					250					255	
Ala	Gly	Gly	Met	Arg	Ile	Asp	Ala	Asn	Gly	Gln	Leu	Ile	Leu	Asn	Val
			260					265					270		
Ala	Tyr	Pro	Phe	Asp	Ala	Gln	Asn	Asn	Leu	Ser	Leu	Arg	Leu	Gly	Gln
	275						280					285			
Gly	Pro	Leu	Tyr	Ile	Asn	Thr	Asp	His	Asn	Leu	Asp	Leu	Asn	Cys	Asn
	290					295					300				
Arg	Gly	Leu	Thr	Thr	Thr	Thr	Thr	Asn	Asn	Thr	Lys	Lys	Leu	Glu	Thr
305					310					315					320
Lys	Ile	Ser	Ser	Gly	Leu	Asp	Tyr	Asp	Thr	Asn	Gly	Ala	Val	Ile	Ile
				325					330					335	
Lys	Leu	Gly	Thr	Gly	Leu	Ser	Phe	Asp	Asn	Thr	Gly	Ala	Leu	Thr	Val
			340					345					350		
Gly	Asn	Thr	Gly	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro
	355						360					365			
Ser	Pro	Asn	Cys	Arg	Ile	His	Ser	Asp	Lys	Asp	Cys	Lys	Phe	Thr	Leu
	370					375					380				
Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Ser	Val	Ala	Ala	Leu
385					390					395					400
Ala	Val	Ser	Gly	Asn	Leu	Ala	Ser	Ile	Thr	Gly	Thr	Val	Ala	Ser	Val
				405					410					415	
Thr	Ile	Phe	Leu	Arg	Phe	Asp	Gln	Asn	Gly	Val	Leu	Met	Glu	Asn	Ser
			420					425					430		
Ser	Leu	Asp	Arg	Gln	Tyr	Trp	Asn	Phe	Arg	Asn	Gly	Asn	Ser	Thr	Asn
	435						440					445			
Ala	Ala	Pro	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn	Leu	Ala	Ala
	450					455					460				
Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Asn	Asn	Ile	Val	Ser	Gln
465					470					475					480
Val	Tyr	Leu	Asn	Gly	Asp	Lys	Ser	Lys	Pro	Met	Thr	Leu	Thr	Ile	Thr
				485					490					495	
Leu	Asn	Gly	Thr	Asn	Glu	Ser	Ser	Glu	Thr	Ser	Gln	Val	Ser	His	Tyr
			500					505					510		
Ser	Met	Ser	Phe	Thr	Trp	Ala	Trp	Glu	Ser	Gly	Gln	Tyr	Ala	Thr	Glu
	515						520					525			
Thr	Phe	Ala	Thr	Asn	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Glu	Gln	
	530					535					540				

<210> 84
 <211> 445
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 6 Fiber

<400> 84

Met	Ser	Lys	Lys	Arg	Ala	Arg	Val	Asp	Asp	Asp	Phe	Asp	Pro	Val	Tyr
1				5					10					15	
Pro	Tyr	Asp	Ala	Asp	Asn	Ala	Pro	Thr	Val	Pro	Phe	Ile	Asn	Pro	Pro
			20					25					30		
Phe	Val	Ser	Ser	Asp	Gly	Phe	Gln	Glu	Lys	Pro	Leu	Gly	Val	Leu	Ser
	35					40						45			
Leu	Arg	Leu	Ala	Asp	Pro	Val	Thr	Thr	Lys	Asn	Gly	Ala	Val	Thr	Leu
	50					55					60				
Lys	Leu	Gly	Glu	Gly	Val	Asp	Leu	Asp	Asp	Ser	Gly	Lys	Leu	Ile	Ser
65					70				75						80
Lys	Asn	Ala	Thr	Lys	Ala	Thr	Ala	Pro	Leu	Ser	Ile	Ser	Asn	Asn	Thr
				85					90					95	
Ile	Ser	Leu	Asn	Met	Asp	Thr	Pro	Leu	Tyr	Asn	Asn	Asn	Gly	Lys	Leu
			100					105					110		
Gly	Met	Lys	Val	Thr	Ala	Pro	Leu	Lys	Ile	Leu	Asp	Thr	Asp	Leu	Leu
		115					120					125			
Lys	Thr	Leu	Val	Val	Ala	Tyr	Gly	Gln	Gly	Leu	Gly	Thr	Asn	Thr	Asn
	130					135					140				
Gly	Ala	Leu	Val	Ala	Gln	Leu	Ala	Tyr	Pro	Leu	Val	Phe	Asn	Thr	Ala
145					150					155					160
Ser	Lys	Ile	Ala	Leu	Asn	Leu	Gly	Asn	Gly	Pro	Leu	Lys	Val	Asp	Ala
				165					170					175	
Asn	Arg	Leu	Asn	Ile	Asn	Cys	Lys	Arg	Gly	Ile	Tyr	Val	Thr	Thr	Thr
			180					185					190		
Lys	Asp	Ala	Leu	Glu	Ile	Asn	Ile	Ser	Trp	Ala	Asn	Ala	Met	Thr	Phe
		195					200					205			
Ile	Gly	Asn	Ala	Ile	Gly	Val	Asn	Ile	Asp	Thr	Lys	Lys	Gly	Leu	Gln
	210					215					220				
Phe	Gly	Thr	Ser	Ser	Thr	Glu	Thr	Asp	Val	Lys	Asn	Ala	Phe	Pro	Leu
225					230					235					240
Gln	Val	Lys	Leu	Gly	Ala	Gly	Leu	Thr	Phe	Asp	Ser	Thr	Gly	Ala	Ile
				245					250					255	
Val	Ala	Trp	Asn	Lys	Glu	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr	Ala
			260					265					270		
Asp	Pro	Ser	Pro	Asn	Cys	His	Ile	Tyr	Ser	Ala	Lys	Asp	Ala	Lys	Leu
		275					280					285			
Thr	Leu	Cys	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Gly	Thr	Val	Ser
	290					295					300				
Leu	Ile	Ala	Val	Asp	Thr	Gly	Ser	Leu	Asn	Pro	Ile	Thr	Gly	Lys	Val
305					310					315					320
Thr	Thr	Ala	Leu	Val	Ser	Leu	Lys	Phe	Asp	Ala	Asn	Gly	Val	Leu	Gln
				325					330					335	
Ala	Ser	Ser	Thr	Leu	Asp	Lys	Glu	Tyr	Trp	Asn	Phe	Arg	Lys	Gly	Asp
			340					345					350		
Val	Thr	Pro	Ala	Asp	Pro	Tyr	Thr	Asn	Ala	Ile	Gly	Phe	Met	Pro	Asn
		355					360					365			
Leu	Asn	Ala	Tyr	Pro	Lys	Asn	Thr	Asn	Ala	Ala	Ala	Lys	Ser	His	Ile
	370					375					380				
Val	Gly	Lys	Val	Tyr	Leu	His	Gly	Asp	Glu	Ser	Lys	Pro	Leu	Asp	Leu

385					390					395					400
Ile	Ile	Thr	Phe	Asn	Glu	Thr	Ser	Asp	Glu	Ser	Cys	Thr	Tyr	Cys	Ile
				405					410					415	
Asn	Phe	Gln	Trp	Gln	Trp	Gly	Thr	Asp	Gln	Tyr	Lys	Asp	Glu	Thr	Leu
			420					425					430		
Ala	Val	Ser	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Lys	Glu			
		435					440					445			

<210> 85

<211> 322

<212> PRT

<213> Chimpanzee Adenovirus- C1 Fiber

<400> 85

Met	Ala	Lys	Arg	Thr	Arg	Leu	Ser	Ser	Ser	Phe	Asn	Pro	Val	Tyr	Pro
1				5					10					15	
Tyr	Glu	Asp	Glu	Asn	Ser	Ser	His	Pro	Phe	Ile	Asn	Pro	Gly	Phe	Ile
			20					25					30		
Ser	Pro	Asn	Gly	Phe	Thr	Gln	Ser	Pro	Asp	Gly	Val	Leu	Thr	Leu	Asn
		35					40					45			
Cys	Val	Ala	Pro	Leu	Thr	Thr	Ala	Asn	Gly	Ala	Leu	Asp	Ile	Lys	Val
	50					55				60					
Gly	Gly	Gly	Leu	Lys	Val	Asn	Ser	Thr	Asp	Gly	Phe	Leu	Glu	Glu	Asn
65				70					75					80	
Ile	Asn	Ile	Thr	Ser	Pro	Leu	Thr	Lys	Ser	Asn	His	Ser	Ile	Gly	Leu
			85					90					95		
Glu	Trp	Ser	Asp	Gly	Leu	Gln	Thr	Asn	Glu	Ala	Lys	Leu	Cys	Val	Lys
			100					105					110		
Leu	Gly	Lys	Gly	Leu	Val	Phe	Asp	Ser	Ser	Ser	Ala	Ile	Ala	Met	Glu
		115					120					125			
Asn	Asn	Thr	Leu	Trp	Thr	Gly	Ala	Lys	Pro	Ser	Ala	Asn	Cys	Val	Ile
	130					135				140					
Lys	Glu	Gly	Glu	Asp	Ser	Pro	Asp	Cys	Lys	Leu	Thr	Leu	Val	Leu	Val
145				150				155					160		
Lys	Asn	Gly	Gly	Leu	Val	Asn	Gly	Tyr	Ile	Thr	Leu	Met	Gly	Asp	Ser
			165				170					175			
Glu	Tyr	Thr	Asn	Thr	Leu	Phe	Lys	Asn	Lys	Gln	Val	Thr	Ile	Asp	Val
			180				185					190			
Asn	Leu	Ala	Phe	Asp	Asn	Thr	Gly	Gln	Ile	Ile	Thr	Tyr	Leu	Ser	Ser
		195				200					205				
Leu	Lys	Ser	Asn	Leu	Asn	Phe	Lys	Asp	Asn	Gln	Asn	Met	Ala	Thr	Gly
	210					215				220					
Thr	Ile	Thr	Ser	Ala	Lys	Gly	Phe	Met	Pro	Ser	Thr	Thr	Ala	Tyr	Pro
225				230				235					240		
Phe	Ile	Thr	Tyr	Ala	Thr	Gln	Ser	Leu	Asn	Glu	Asp	Tyr	Ile	Tyr	Gly
			245				250					255			
Glu	Cys	Tyr	Tyr	Lys	Ser	Thr	Asn	Gly	Thr	Leu	Phe	Pro	Leu	Lys	Val
			260				265					270			
Thr	Val	Thr	Leu	Asn	Arg	Arg	Met	Ser	Ala	Ser	Gly	Met	Ala	Tyr	Ala
		275				280			285						
Met	Asn	Phe	Ser	Trp	Ser	Leu	Asn	Ala	Glu	Glu	Ala	Pro	Glu	Thr	Thr
	290					295			300						
Glu	Val	Thr	Leu	Ile	Thr	Ser	Pro	Phe	Phe	Phe	Ser	Tyr	Ile	Arg	Glu
305				310				315					320		

Asp Asp

<210> 86
<211> 425
<212> PRT
<213> Chimpanzee Adenovirus- CV68 Fiber

<400> 86
Met Ser Lys Lys Arg Val Arg Val Asp Asp Asp Phe Asp Pro Val Tyr
1 5 10 15
Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro
20 25 30
Phe Val Ser Ser Asp Gly Phe Gln Glu Lys Pro Leu Gly Val Leu Ser
35 40 45
Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu
50 55 60
Lys Leu Gly Glu Gly Val Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser
65 70 75 80
Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr
85 90 95
Ile Ser Leu Asn Met Asp His Pro Phe Tyr Thr Lys Asp Gly Lys Leu
100 105 110
Ser Leu Gln Val Ser Pro Pro Leu Asn Ile Leu Arg Thr Ser Ile Leu
115 120 125
Asn Thr Leu Ala Leu Gly Phe Gly Ser Gly Leu Gly Leu Arg Gly Ser
130 135 140
Ala Leu Ala Val Gln Leu Val Ser Pro Leu Thr Phe Asp Thr Asp Gly
145 150 155 160
Asn Ile Lys Leu Thr Leu Asp Arg Gly Leu His Val Thr Thr Gly Asp
165 170 175
Ala Ile Glu Ser Asn Ile Ser Trp Ala Lys Gly Leu Lys Phe Glu Asp
180 185 190
Gly Ala Ile Ala Thr Asn Ile Gly Asn Gly Leu Glu Phe Gly Ser Ser
195 200 205
Ser Thr Glu Thr Gly Val Asp Asp Ala Tyr Pro Ile Gln Val Lys Leu
210 215 220
Gly Ser Gly Leu Ser Phe Asp Ser Thr Gly Ala Ile Met Ala Gly Asn
225 230 235 240
Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro
245 250 255
Asn Cys Gln Ile Leu Ala Glu Asn Asp Ala Lys Leu Thr Leu Cys Leu
260 265 270
Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Val Leu Val Val
275 280 285
Gly Ser Gly Asn Leu Asn Pro Ile Thr Gly Thr Val Ser Ser Ala Gln
290 295 300
Val Phe Leu Arg Phe Asp Ala Asn Gly Val Leu Thr Glu His Ser
305 310 315 320
Thr Leu Lys Lys Tyr Trp Gly Tyr Arg Gln Gly Asp Ser Ile Asp Gly
325 330 335
Thr Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Lys Ala Tyr
340 345 350
Pro Lys Ser Gln Ser Ser Thr Thr Lys Asn Asn Ile Val Gly Gln Val

		355					360					365				
Tyr	Met	Asn	Gly	Asp	Val	Ser	Lys	Pro	Met	Leu	Leu	Thr	Ile	Thr	Leu	
	370					375					380					
Asn	Gly	Thr	Asp	Asp	Ser	Asn	Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Tyr	
385					390					395					400	
Thr	Trp	Thr	Asn	Gly	Ser	Tyr	Val	Gly	Ala	Thr	Phe	Gly	Ala	Asn	Ser	
				405					410						415	
Tyr	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu								
			420					425								

<210> 87
 <211> 954
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd20 Hexon

<400> 87

Met	Ala	Thr	Pro	Ser	Met	Met	Pro	Gln	Trp	Ser	Tyr	Met	His	Ile	Ser	
1				5					10					15		
Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala	
		20						25					30			
Arg	Ala	Thr	Glu	Ser	Tyr	Phe	Ser	Leu	Ser	Asn	Lys	Phe	Arg	Asn	Pro	
		35					40					45				
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu	
	50					55					60					
Thr	Leu	Arg	Phe	Ile	Pro	Val	Asp	Arg	Glu	Asp	Thr	Ala	Tyr	Ser	Tyr	
65				70					75						80	
Lys	Ala	Arg	Phe	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met	
			85					90						95		
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Thr	
		100						105					110			
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly	
	115						120					125				
Ala	Pro	Asn	Pro	Cys	Glu	Trp	Asp	Glu	Ala	Ala	Thr	Ala	Leu	Asp	Ile	
	130					135					140					
Asp	Leu	Asn	Ala	Glu	Asp	Asp	Glu	Glu	Ser	Asp	Glu	Ala	Gln	Gly	Glu	
145				150					155						160	
Ala	Asp	Gln	Gln	Lys	Thr	His	Val	Phe	Gly	Gln	Ala	Pro	Tyr	Ser	Gly	
			165					170						175		
Gln	Asn	Ile	Thr	Lys	Glu	Gly	Ile	Gln	Ile	Gly	Ile	Asp	Ala	Ala	Ser	
	180							185					190			
Gln	Ala	Gln	Thr	Pro	Val	Tyr	Ala	Asp	Lys	Thr	Phe	Gln	Pro	Glu	Pro	
	195						200					205				
Gln	Val	Gly	Glu	Ser	Gln	Trp	Asn	Glu	Thr	Glu	Ile	Ser	Tyr	Gly	Ala	
	210					215					220					
Gly	Arg	Val	Leu	Lys	Lys	Thr	Thr	Leu	Met	Lys	Pro	Cys	Tyr	Gly	Ser	
225				230						235					240	
Tyr	Ala	Arg	Pro	Thr	Asn	Glu	Asn	Gly	Gly	Gln	Gly	Ile	Leu	Leu	Glu	
			245					250						255		
Gln	Asp	Gly	Lys	Lys	Glu	Ser	Gln	Val	Glu	Met	Gln	Phe	Phe	Ser	Thr	
	260							265					270			
Thr	Gln	Ala	Ala	Ala	Gly	Asn	Ser	Asp	Asn	Pro	Thr	Pro	Lys	Val	Val	
	275						280					285				
Leu	Tyr	Ser	Glu	Asp	Val	Asn	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile	Ser	
	290					295					300					

Tyr	Met	Pro	Thr	Asn	Asn	Glu	Thr	Asn	Ser	Arg	Glu	Leu	Leu	Gly	Gln
305					310					315					320
Gln	Ala	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp	Asn	Phe
				325					330					335	
Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val	Leu	Ala
			340					345					350		
Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp	Arg	Asn
		355					360					365			
Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Met	Gly	Asp	Arg	Thr
	370					375					380				
Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro	Asp
385					390					395				400	
Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu	Pro	Asn	Tyr
				405					410					415	
Cys	Phe	Pro	Leu	Gly	Gly	Val	Ile	Asn	Thr	Glu	Thr	Phe	Thr	Lys	Val
			420					425					430		
Lys	Pro	Lys	Ala	Ala	Gln	Asp	Ala	Gln	Trp	Glu	Lys	Asp	Ser	Glu	Phe
		435					440					445			
Ser	Asp	Lys	Asn	Glu	Ile	Arg	Val	Gly	Asn	Asn	Phe	Ala	Met	Glu	Ile
	450					455					460				
Asn	Leu	Asn	Ala	Asn	Leu	Trp	Arg	Asn	Phe	Leu	Tyr	Ser	Asn	Val	Ala
465					470					475					480
Leu	Tyr	Leu	Pro	Asp	Lys	Leu	Lys	Tyr	Thr	Pro	Ser	Asn	Val	Gln	Ile
				485					490					495	
Ser	Asn	Asn	Pro	Asn	Ser	Tyr	Asp	Tyr	Met	Asn	Lys	Arg	Val	Val	Ala
			500					505					510		
Pro	Gly	Leu	Val	Asp	Cys	Tyr	Ile	Asn	Leu	Gly	Ala	Arg	Trp	Ser	Leu
		515					520					525			
Asp	Tyr	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	His	His	Arg	Asn	Ala	Gly
	530					535					540				
Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val	Pro	Phe
545					550					555					560
His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	Asn	Leu	Leu	Leu
				565					570					575	
Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	Lys	Asp	Val	Asn
			580					585					590		
Met	Val	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg	Val	Asp	Gly	Ala
		595					600					605			
Ser	Ile	Lys	Phe	Glu	Ser	Ile	Cys	Leu	Tyr	Ala	Thr	Phe	Phe	Pro	Met
	610					615					620				
Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu	Arg	Asn	Asp	Thr
625					630					635					640
Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met	Leu	Tyr
				645					650					655	
Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro	Ser	Arg
			660					665					670		
Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ala	Phe	Thr	Arg	Leu	Lys	Thr	Lys
		675					680					685			
Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	Pro	Tyr	Thr	Thr	Tyr	Ser
	690					695					700				
Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	Tyr	Leu	Asn	His	Thr	Phe
705					710					715					720
Lys	Lys	Val	Ser	Val	Thr	Phe	Asp	Ser	Ser	Val	Ser	Trp	Pro	Gly	Asn
				725					730					735	
Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	Ile	Lys	Arg	Ser	Val	Asp

			740					745					750				
Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	Trp	Phe		
		755					760					765					
Leu	Val	Gln	Met	Leu	Ala	Asn	Tyr	Asn	Ile	Gly	Tyr	Gln	Gly	Phe	Tyr		
	770					775					780						
Ile	Pro	Glu	Ser	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg	Asn	Phe		
785					790				795						800		
Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Gln	Thr	Lys	Tyr	Lys	Asp	Tyr		
				805					810					815			
Gln	Glu	Val	Gly	Ile	Ile	His	Gln	His	Asn	Asn	Ser	Gly	Phe	Val	Gly		
			820					825					830				
Tyr	Leu	Ala	Pro	Thr	Met	Arg	Glu	Gly	Gln	Ala	Tyr	Pro	Ala	Asn	Phe		
	835						840					845					
Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Thr	Ala	Val	Asp	Ser	Ile	Thr	Gln	Lys		
	850					855					860						
Lys	Phe	Leu	Cys	Asp	Arg	Thr	Leu	Trp	Arg	Ile	Pro	Phe	Ser	Ser	Asn		
865					870				875						880		
Phe	Met	Ser	Met	Gly	Ala	Leu	Ser	Asp	Leu	Gly	Gln	Asn	Leu	Leu	Tyr		
				885				890						895			
Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr	Phe	Glu	Val	Asp	Pro	Met		
			900					905					910				
Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Val	Leu	Phe	Glu	Val	Phe	Asp	Val	Val		
	915						920					925					
Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Thr	Val	Tyr	Leu	Arg		
	930					935					940						
Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr								
945					950												

<210> 88

<211> 940

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 4 Hexon

<400> 88

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala		
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Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala		
		20						25					30				
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro		
	35						40					45					
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu		
	50					55					60						
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr		
65					70				75						80		
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met		
				85				90						95			
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser		
		100						105					110				
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly		
	115						120					125					
Ala	Pro	Asn	Ser	Ser	Gln	Trp	Glu	Gln	Lys	Lys	Thr	Gly	Asn	Asn	Ala		
	130					135					140						
Asn	Gly	Asp	Thr	Glu	Asn	Val	Thr	Tyr	Gly	Val	Ala	Ala	Met	Gly	Gly		
145					150					155					160		

Ile	Asp	Ile	Asp	Lys	Asn	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Asp	Thr	Lys
				165				170						175	
Asp	Asp	Asp	Asn	Glu	Ile	Tyr	Ala	Asp	Lys	Thr	Tyr	Gln	Pro	Glu	Pro
			180					185					190		
Gln	Ile	Gly	Glu	Glu	Asn	Trp	Gln	Glu	Thr	Tyr	Ser	Tyr	Tyr	Gly	Gly
		195					200					205			
Arg	Ala	Leu	Lys	Lys	Asp	Thr	Lys	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe
	210					215					220				
Ala	Arg	Pro	Thr	Asn	Val	Lys	Gly	Gly	Gln	Ala	Lys	Ile	Lys	Thr	Asp
225					230					235					240
Gly	Asp	Val	Lys	Ser	Phe	Asp	Ile	Asp	Leu	Ala	Phe	Phe	Asp	Ile	Pro
				245					250					255	
Asn	Ser	Gly	Ala	Gly	Asn	Gly	Thr	Asn	Val	Asn	Asp	Asp	Pro	Asp	Met
		260						265					270		
Val	Met	Tyr	Thr	Glu	Asn	Val	Asn	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile
		275					280					285			
Val	Tyr	Lys	Pro	Gly	Thr	Ser	Asp	Asp	Ser	Ser	Lys	Val	Asn	Leu	Cys
	290					295					300				
Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp	Asn
305					310					315					320
Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val	Leu
				325					330					335	
Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp	Arg
			340					345					350		
Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp	Arg
		355					360					365			
Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro
	370					375					380				
Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Val	Glu	Asp	Glu	Leu	Pro	Asn
385					390					395					400
Tyr	Cys	Phe	Pro	Leu	Asp	Gly	Ala	Gly	Thr	Asn	Ser	Val	Tyr	Gln	Gly
				405					410					415	
Val	Lys	Pro	Lys	Thr	Asp	Asn	Gly	Asn	Asp	Gln	Trp	Glu	Thr	Asp	Ser
			420					425					430		
Thr	Val	Ser	Ser	His	Asn	Gln	Ile	Cys	Lys	Gly	Asn	Ile	Tyr	Ala	Met
		435					440					445			
Glu	Ile	Asn	Leu	Gln	Ala	Asn	Leu	Trp	Arg	Ser	Phe	Leu	Tyr	Ser	Asn
	450					455					460				
Val	Ala	Leu	Tyr	Leu	Pro	Asp	Ser	Tyr	Lys	Tyr	Thr	Pro	Ala	Asn	Ile
465					470					475					480
Thr	Leu	Pro	Thr	Asn	Thr	Asn	Thr	Tyr	Asp	Tyr	Met	Asn	Gly	Arg	Val
				485					490					495	
Val	Pro	Pro	Ser	Leu	Val	Asp	Ala	Tyr	Ile	Asn	Ile	Gly	Ala	Arg	Trp
			500					505					510		
Ser	Leu	Asp	Pro	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	His	His	Arg	Asn
		515					520					525			
Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val
	530					535					540				
Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	Ser	Leu
545					550					555					560
Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	Lys	Asp
				565					570					575	
Val	Asn	Met	Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg	Thr	Asp
			580					585					590		
Gly	Ala	Ser	Ile	Ser	Phe	Thr	Ser	Ile	Asn	Leu	Tyr	Ala	Thr	Phe	Phe

Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro
	35						40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50					55					60				
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr
65					70					75					80
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85					90					95	
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser
			100					105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Ser	Ser	Gln	Trp	Glu	Gln	Lys	Lys	Thr	Gly	Asn	Asn	Ala
	130					135					140				
Asn	Gly	Asp	Thr	Glu	Asn	Val	Thr	Tyr	Gly	Val	Ala	Ala	Met	Gly	Gly
145					150					155					160
Ile	Asp	Ile	Asp	Lys	Asn	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Asp	Thr	Lys
				165					170					175	
Asp	Asp	Asp	Asn	Glu	Ile	Tyr	Ala	Asp	Lys	Thr	Tyr	Gln	Pro	Glu	Pro
			180					185					190		
Gln	Ile	Gly	Glu	Glu	Asn	Trp	Gln	Glu	Thr	Tyr	Ser	Tyr	Tyr	Gly	Gly
	195					200						205			
Arg	Ala	Leu	Lys	Lys	Asp	Thr	Lys	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe
	210					215					220				
Ala	Arg	Pro	Thr	Asn	Val	Lys	Gly	Gly	Gln	Ala	Lys	Ile	Lys	Thr	Asp
225					230					235					240
Gly	Asp	Val	Lys	Ser	Phe	Asp	Ile	Asp	Leu	Ala	Phe	Phe	Asp	Ile	Pro
				245					250					255	
Asn	Ser	Gly	Ala	Gly	Asn	Gly	Thr	Asn	Val	Asn	Asp	Asp	Pro	Asp	Met
		260						265					270		
Val	Met	Tyr	Thr	Glu	Asn	Val	Asn	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile
	275						280					285			
Val	Tyr	Lys	Pro	Gly	Thr	Ser	Asp	Asp	Ser	Ser	Lys	Val	Asn	Leu	Cys
	290					295					300				
Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp	Asn
305					310					315					320
Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val	Leu
				325					330					335	
Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp	Arg
			340					345					350		
Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp	Arg
	355						360					365			
Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro
	370					375					380				
Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Val	Glu	Asp	Glu	Leu	Pro	Asn
385					390					395					400
Tyr	Cys	Phe	Pro	Leu	Asp	Gly	Ala	Gly	Thr	Asn	Ser	Val	Tyr	Gln	Gly
				405					410					415	
Val	Lys	Pro	Lys	Thr	Asp	Asn	Gly	Asn	Asp	Gln	Trp	Glu	Thr	Asp	Ser
			420					425					430		
Thr	Val	Ser	Ser	His	Asn	Gln	Ile	Cys	Lys	Gly	Asn	Ile	Tyr	Ala	Met
	435						440					445			
Glu	Ile	Asn	Leu	Gln	Ala	Asn	Leu	Trp	Arg	Ser	Phe	Leu	Tyr	Ser	Asn
	450					455					460				
Val	Ala	Leu	Tyr	Leu	Pro	Asp	Ser	Tyr	Lys	Tyr	Thr	Pro	Ala	Asn	Ile

465					470					475					480
Thr	Leu	Pro	Thr	Asn	Thr	Asn	Thr	Tyr	Asp	Tyr	Met	Asn	Gly	Arg	Val
				485					490					495	
Val	Pro	Pro	Ser	Leu	Val	Asp	Ala	Tyr	Ile	Asn	Ile	Gly	Ala	Arg	Trp
			500					505					510		
Ser	Leu	Asp	Pro	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	His	His	Arg	Asn
		515					520					525			
Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val
	530					535					540				
Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	Ser	Leu
545					550					555					560
Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	Lys	Asp
				565					570						575
Val	Asn	Met	Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg	Thr	Asp
			580					585					590		
Gly	Ala	Ser	Ile	Ser	Phe	Thr	Ser	Ile	Asn	Leu	Tyr	Ala	Thr	Phe	Phe
		595					600					605			
Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu	Arg	Asn
	610					615					620				
Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met
625					630					635					640
Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro
				645					650						655
Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ser	Phe	Thr	Arg	Leu	Lys
			660					665					670		
Thr	Arg	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	Pro	Tyr	Phe	Val
		675					680					685			
Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	Tyr	Leu	Asn	His
	690					695				700					
Thr	Phe	Lys	Lys	Val	Ser	Ile	Thr	Phe	Asp	Ser	Ser	Val	Ser	Trp	Pro
705					710					715					720
Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	Ile	Lys	Arg	Thr
				725					730					735	
Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp
		740						745					750		
Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	His	Tyr	Asn	Ile	Gly	Tyr	Gln	Gly
	755						760					765			
Phe	Tyr	Val	Pro	Glu	Gly	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg
	770					775					780				
Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Val	Asn	Tyr	Lys
785					790					795					800
Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe
				805					810					815	
Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Pro	Tyr	Pro	Ala
			820					825					830		
Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Ser	Ala	Val	Ala	Ser	Val	Thr
	835						840					845			
Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Val	Met	Trp	Arg	Ile	Pro	Phe	Ser
	850					855					860				
Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln	Asn	Met
865					870					875					880
Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Asn	Phe	Glu	Val	Asp
				885					890					895	
Pro	Met	Asp	Glu	Ser	Thr	Leu	Leu	Tyr	Val	Val	Phe	Glu	Val	Phe	Asp
			900					905					910		

Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr
		915					920					925			
Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Lys	Ala	Thr	Thr				
		930					935				940				

<210> 90
 <211> 940
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 7 Hexon

<400> 90

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala
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Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
			20					25					30		
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50				55					60					
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr
65				70					75					80	
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85				90					95		
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser
			100					105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115				120						125			
Ala	Pro	Asn	Ser	Ser	Gln	Trp	Glu	Gln	Lys	Lys	Thr	Gly	Lys	Asn	Ala
	130				135						140				
Asn	Gly	Asp	Thr	Glu	Asn	Val	Thr	Tyr	Gly	Val	Ala	Ala	Met	Gly	Gly
145				150					155					160	
Ile	Asp	Ile	Asp	Lys	Asn	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Asp	Thr	Lys
			165					170						175	
Asp	Gly	Asp	Asn	Glu	Ile	Tyr	Ala	Asp	Lys	Thr	Tyr	Gln	Pro	Glu	Pro
			180					185				190			
Gln	Ile	Gly	Glu	Glu	Asn	Trp	Gln	Glu	Thr	Tyr	Ser	Tyr	Tyr	Gly	Gly
	195				200							205			
Arg	Ala	Leu	Lys	Lys	Asp	Thr	Lys	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe
	210				215						220				
Ala	Arg	Pro	Thr	Asn	Val	Lys	Gly	Gly	Gln	Ala	Lys	Ile	Lys	Thr	Asp
225				230					235						240
Gly	Asp	Val	Lys	Ser	Phe	Asp	Ile	Asp	Leu	Ala	Phe	Phe	Asp	Ile	Pro
				245				250						255	
Asn	Ser	Gly	Ala	Gly	Asn	Gly	Thr	Asn	Val	Asn	Asp	Asp	Pro	Asp	Met
			260					265					270		
Val	Met	Tyr	Thr	Glu	Asn	Val	Asn	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile
	275						280					285			
Val	Tyr	Lys	Pro	Gly	Thr	Ser	Asp	Asp	Ser	Ser	Glu	Val	Asn	Leu	Cys
	290					295					300				
Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp	Asn
305				310					315						320
Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val	Leu
				325					330					335	
Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp	Arg

Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Val	Asn	Tyr	Lys
785					790					795					800
Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe
			805						810					815	
Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Pro	Tyr	Pro	Ala
			820					825					830		
Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Ser	Ala	Val	Thr	Ser	Val	Thr
		835					840					845			
Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Val	Met	Trp	Arg	Ile	Pro	Phe	Ser
	850					855				860					
Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln	Asn	Met
865					870					875					880
Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Asn	Phe	Glu	Val	Asp
			885						890					895	
Pro	Met	Asp	Glu	Ser	Thr	Leu	Leu	Tyr	Val	Val	Phe	Glu	Val	Phe	Asp
			900					905					910		
Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr
		915				920						925			
Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr				
	930					935					940				

<210> 91
 <211> 930
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 9 Hexon

<400> 91

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala
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Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
			20					25					30		
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50				55					60					
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr
65					70					75					80
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85					90					95	
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser
			100					105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Thr	Cys	Gln	Trp	Thr	Tyr	Thr	Asp	Asn	Gln	Thr	Glu	Lys
	130				135						140				
Thr	Ala	Thr	Tyr	Gly	Asn	Ala	Pro	Val	Glu	Gly	Ile	Asn	Ile	Thr	Lys
145					150					155					160
Asp	Gly	Ile	Gln	Leu	Gly	Thr	Asp	Ser	Asp	Gly	Gln	Ala	Ile	Tyr	Ala
			165						170					175	
Asp	Glu	Thr	Tyr	Gln	Pro	Glu	Pro	Gln	Val	Gly	Asp	Pro	Glu	Trp	His
			180					185					190		
Asp	Thr	Thr	Gly	Thr	Glu	Glu	Lys	Tyr	Gly	Gly	Arg	Ala	Leu	Lys	Pro
		195					200					205			
Ala	Thr	Asp	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe	Ala	Lys	Pro	Thr	Asn

210		215		220
Val Lys Gly Gly Gln Ala Lys Ser Arg Thr Lys Thr Asp Gly Thr Thr				
225		230		235
Glu Pro Asp Ile Asp Met Ala Phe Phe Asp Gly Arg Asn Ala Thr Thr				240
		245		250
Ala Gly Leu Thr Pro Glu Ile Val Leu Tyr Thr Glu Asn Val Asp Leu				255
		260		265
Glu Thr Pro Asp Thr His Ile Val Tyr Lys Ala Gly Thr Asp Asp Ser				270
		275		280
Ser Ser Ser Ile Asn Leu Gly Gln Gln Ser Met Pro Asn Arg Pro Asn				285
		290		295
Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr Asn Ser				300
305		310		315
Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala				320
		325		330
Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu				335
		340		345
Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln				350
		355		360
Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Ile Ile Glu Asn His Gly				365
		370		375
Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asn Ala Val Gly				380
385		390		395
Arg Thr Asn Ser Tyr Gln Gly Ile Lys Pro Asn Gly Gly Asp Pro Ala				400
		405		410
Thr Trp Ala Lys Asp Glu Ser Val Asn Asp Ser Asn Glu Leu Gly Lys				415
		420		425
Gly Asn Pro Phe Ala Met Glu Ile Asn Ile Gln Ala Asn Leu Trp Arg				430
		435		440
Asn Phe Leu Tyr Ala Asn Val Ala Leu Tyr Leu Pro Asp Ser Tyr Lys				445
		450		455
Tyr Thr Pro Ala Asn Ile Thr Leu Pro Ala Asn Thr Asn Thr Tyr Asp				460
465		470		475
Tyr Met Asn Gly Arg Val Val Ala Pro Ser Leu Val Asp Ala Tyr Ile				480
		485		490
Asn Ile Gly Ala Arg Trp Ser Leu Asp Pro Met Asp Asn Val Asn Pro				495
		500		505
Phe Asn His His Arg Asn Ala Gly Leu Arg Tyr Arg Ser Met Leu Leu				510
		515		520
Gly Asn Gly Arg Tyr Val Pro Phe His Ile Gln Val Pro Gln Lys Phe				525
		530		535
Phe Ala Ile Lys Ser Leu Leu Leu Leu Pro Gly Ser Tyr Thr Tyr Glu				540
545		550		555
Trp Asn Phe Arg Lys Asp Val Asn Met Ile Leu Gln Ser Ser Leu Gly				560
		565		570
Asn Asp Leu Arg Thr Asp Gly Ala Ser Ile Ala Phe Thr Ser Ile Asn				575
		580		585
Leu Tyr Ala Thr Phe Phe Pro Met Ala His Asn Thr Ala Ser Thr Leu				590
		595		600
Glu Ala Met Leu Arg Asn Asp Thr Asn Asp Gln Ser Phe Asn Asp Tyr				605
		610		615
Leu Ser Ala Ala Asn Met Leu Tyr Pro Ile Pro Ala Asn Ala Thr Asn				620
625		630		635
Val Pro Ile Ser Ile Pro Ser Arg Asn Trp Ala Ala Phe Arg Gly Trp				640
		645		650
				655

Ser Phe Thr Arg Leu Lys Thr Arg Glu Thr Pro Ser Leu Gly Ser Gly
 660 665 670
 Phe Asp Pro Tyr Phe Val Tyr Ser Gly Ser Ile Pro Tyr Leu Asp Gly
 675 680 685
 Thr Phe Tyr Leu Asn His Thr Phe Lys Lys Val Ser Ile Thr Phe Asp
 690 695 700
 Ser Ser Val Ser Trp Pro Gly Asn Asp Arg Leu Leu Thr Pro Asn Glu
 705 710 715 720
 Phe Glu Ile Lys Arg Thr Val Asp Gly Glu Gly Tyr Asn Val Ala Gln
 725 730 735
 Cys Asn Met Thr Lys Asp Trp Phe Leu Val Gln Met Leu Ala His Tyr
 740 745 750
 Asn Ile Gly Tyr Gln Gly Phe Tyr Val Pro Glu Gly Tyr Lys Asp Arg
 755 760 765
 Met Tyr Ser Phe Phe Arg Asn Phe Gln Pro Met Ser Arg Gln Val Val
 770 775 780
 Asp Glu Val Asn Tyr Lys Asp Tyr Gln Ala Val Thr Leu Ala Tyr Gln
 785 790 795 800
 His Asn Asn Ser Gly Phe Val Gly Tyr Leu Ala Pro Thr Met Arg Gln
 805 810 815
 Gly Gln Pro Tyr Pro Ala Asn Tyr Pro Tyr Pro Leu Ile Gly Lys Ser
 820 825 830
 Ala Val Ala Ser Val Thr Gln Lys Phe Leu Cys Asp Arg Val Met
 835 840 845
 Trp Arg Ile Pro Phe Ser Ser Asn Phe Met Ser Met Gly Ala Leu Thr
 850 855 860
 Asp Leu Gly Gln Asn Met Leu Tyr Ala Asn Ser Ala His Ala Leu Asp
 865 870 875 880
 Met Asn Phe Glu Val Asp Pro Met Asp Glu Ser Thr Leu Leu Tyr Val
 885 890 895
 Val Phe Glu Val Phe Asp Val Val Arg Val His Gln Pro His Arg Gly
 900 905 910
 Val Ile Glu Ala Val Tyr Leu Arg Thr Pro Phe Ser Ala Gly Asn Ala
 915 920 925
 Thr Thr
 930

<210> 92
 <211> 930
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 10 Hexon

<400> 92
 Met Ala Thr Pro Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala
 1 5 10 15
 Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
 20 25 30
 Arg Ala Thr Asp Thr Tyr Phe Ser Leu Gly Asn Lys Phe Arg Asn Pro
 35 40 45
 Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
 50 55 60
 Thr Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
 65 70 75 80
 Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met

				85				90					95			
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser	
			100					105					110			
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly	
		115					120					125				
Ala	Pro	Asn	Thr	Cys	Gln	Trp	Thr	Tyr	Thr	Asp	Asn	Gln	Thr	Glu	Lys	
	130					135					140					
Thr	Ala	Thr	Tyr	Gly	Asn	Ala	Pro	Val	Gln	Gly	Ile	Ser	Ile	Thr	Lys	
145					150					155					160	
Asp	Gly	Ile	Gln	Leu	Gly	Thr	Asp	Thr	Asp	Asp	Gln	Pro	Ile	Tyr	Ala	
			165					170						175		
Asp	Lys	Thr	Tyr	Gln	Pro	Glu	Pro	Gln	Val	Gly	Asp	Ala	Glu	Trp	His	
		180						185					190			
Asp	Ile	Thr	Gly	Thr	Asp	Glu	Lys	Tyr	Gly	Gly	Arg	Ala	Leu	Lys	Pro	
	195						200					205				
Asp	Thr	Lys	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe	Ala	Lys	Pro	Thr	Asn	
	210					215				220						
Lys	Glu	Gly	Gly	Gln	Ala	Asn	Val	Lys	Thr	Glu	Thr	Gly	Gly	Thr	Lys	
225				230						235					240	
Glu	Tyr	Asp	Ile	Asp	Met	Ala	Phe	Phe	Asp	Asn	Arg	Ser	Ala	Ala	Ala	
				245				250						255		
Ala	Gly	Leu	Ala	Pro	Glu	Ile	Val	Leu	Tyr	Thr	Glu	Asn	Val	Asp	Leu	
		260						265					270			
Glu	Thr	Pro	Asp	Thr	His	Ile	Val	Tyr	Lys	Ala	Gly	Thr	Asp	Asp	Ser	
	275						280					285				
Ser	Ser	Ser	Ile	Asn	Leu	Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	
	290					295				300						
Tyr	Ile	Gly	Phe	Arg	Asp	Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	
305				310					315					320		
Thr	Gly	Asn	Met	Gly	Val	Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	
			325					330						335		
Val	Val	Asp	Leu	Gln	Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	
		340						345					350			
Leu	Asp	Ser	Leu	Gly	Asp	Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	
	355						360					365				
Ala	Val	Asp	Ser	Tyr	Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	
	370					375				380						
Val	Glu	Asp	Glu	Leu	Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Asn	Ala	Val	Gly	
385					390				395					400		
Arg	Thr	Asp	Thr	Tyr	Gln	Gly	Ile	Lys	Ala	Asn	Gly	Ala	Asp	Gln	Thr	
			405					410						415		
Thr	Trp	Thr	Lys	Asp	Asp	Thr	Val	Asn	Asp	Ala	Asn	Glu	Leu	Gly	Lys	
		420						425					430			
Gly	Asn	Pro	Phe	Ala	Met	Glu	Ile	Asn	Ile	Gln	Ala	Asn	Leu	Trp	Arg	
	435						440					445				
Asn	Phe	Leu	Tyr	Ala	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Ser	Tyr	Lys	
	450					455				460						
Tyr	Thr	Pro	Ala	Asn	Ile	Thr	Leu	Pro	Thr	Asn	Thr	Asn	Thr	Tyr	Asp	
465					470				475					480		
Tyr	Met	Asn	Gly	Arg	Val	Val	Ala	Pro	Ser	Leu	Val	Asp	Ala	Tyr	Ile	
			485					490						495		
Asn	Ile	Gly	Ala	Arg	Trp	Ser	Leu	Asp	Pro	Met	Asp	Asn	Val	Asn	Pro	
		500						505					510			
Phe	Asn	His	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	
	515						520					525				

<211> 960
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 11 Hexon

<400> 93
 Met Ala Thr Pro Ser Met Met Pro Gln Trp Ser Tyr Met His Ile Ser
 1 5 10 15
 Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
 20 25 30
 Arg Ala Thr Glu Ser Tyr Phe Ser Leu Ser Asn Lys Phe Arg Asn Pro
 35 40 45
 Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
 50 55 60
 Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
 65 70 75 80
 Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
 85 90 95
 Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
 100 105 110
 Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
 115 120 125
 Ala Pro Asn Ser Cys Glu Trp Glu Gln Glu Glu Thr Gln Ala Val Glu
 130 135 140
 Glu Ala Ala Glu Glu Glu Glu Glu Asp Ala Asp Gly Gln Ala Glu Glu
 145 150 155 160
 Glu Gln Ala Ala Thr Lys Lys Thr His Val Tyr Ala Gln Ala Pro Leu
 165 170 175
 Ser Gly Glu Lys Ile Ser Lys Asp Gly Leu Gln Ile Gly Thr Asp Ala
 180 185 190
 Thr Ala Thr Glu Gln Lys Pro Ile Tyr Ala Asp Pro Thr Phe Gln Pro
 195 200 205
 Glu Pro Gln Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp Ala Thr Val
 210 215 220
 Ala Gly Gly Arg Val Leu Lys Lys Thr Thr Pro Met Lys Pro Cys Tyr
 225 230 235 240
 Gly Ser Tyr Ala Arg Pro Thr Asn Ala Asn Gly Gly Gln Gly Val Leu
 245 250 255
 Ala Ala Asn Ala Gln Gly Gln Leu Glu Ser Gln Val Glu Met Gln Phe
 260 265 270
 Phe Ser Thr Ser Glu Asn Ala Arg Asn Glu Ala Asn Asn Ile Gln Pro
 275 280 285
 Lys Leu Val Leu Tyr Ser Glu Asp Val His Met Glu Thr Pro Asp Thr
 290 295 300
 His Leu Ser Tyr Lys Pro Thr Lys Ser Asp Asp Asn Ser Lys Val Met
 305 310 315 320
 Leu Gly Gln Gln Ala Met Pro Asn Arg Pro Asn Tyr Ile Gly Phe Arg
 325 330 335
 Asp Asn Phe Ile Gly Leu Met Tyr Tyr Asn Ser Thr Gly Asn Met Gly
 340 345 350
 Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln
 355 360 365
 Asp Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu Leu Asp Ser Met Gly
 370 375 380
 Asp Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val Asp Ser Tyr
 385 390 395 400

Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu	
			405						410					415		
Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Gly	Gly	Ile	Gly	Val	Thr	Asp	Thr	Tyr	
			420					425					430			
Gln	Ala	Val	Lys	Thr	Asn	Asn	Gly	Asn	Asn	Gly	Gly	Gln	Val	Thr	Trp	
			435				440					445				
Thr	Lys	Asp	Glu	Thr	Phe	Ala	Glu	Arg	Asn	Glu	Ile	Gly	Val	Gly	Asn	
			450			455					460					
Asn	Phe	Ala	Met	Glu	Ile	Asn	Leu	Asn	Ala	Asn	Leu	Trp	Arg	Asn	Phe	
465					470				475						480	
Leu	Tyr	Ser	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Lys	Leu	Lys	Tyr	Asn	
				485					490						495	
Pro	Ser	Asn	Val	Asp	Ile	Ser	Asp	Asn	Pro	Asn	Thr	Tyr	Asp	Tyr	Met	
			500					505					510			
Asn	Lys	Arg	Val	Val	Ala	Pro	Gly	Leu	Val	Asp	Cys	Tyr	Ile	Asn	Leu	
			515				520					525				
Gly	Ala	Arg	Trp	Ser	Leu	Asp	Tyr	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	
			530			535					540					
His	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	
545					550				555						560	
Gly	Arg	Tyr	Val	Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	
				565					570						575	
Ile	Lys	Asn	Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	
			580					585					590			
Phe	Arg	Lys	Asp	Val	Asn	Met	Val	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	
			595			600						605				
Leu	Arg	Val	Asp	Gly	Ala	Ser	Ile	Lys	Phe	Glu	Ser	Ile	Cys	Leu	Tyr	
			610			615					620					
Ala	Thr	Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	
625					630				635						640	
Met	Leu	Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	
				645				650						655		
Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	
			660					665					670			
Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ala	Phe	
			675			680						685				
Thr	Arg	Leu	Lys	Thr	Lys	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	
			690			695					700					
Pro	Tyr	Tyr	Thr	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	
705					710				715						720	
Tyr	Leu	Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Val	Thr	Phe	Asp	Ser	Ser	
				725				730						735		
Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	
			740					745					750			
Ile	Lys	Arg	Ser	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	
			755			760						765				
Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	Asn	Tyr	Asn	Ile	
					775					780						
Gly	Tyr	Gln	Gly	Phe	Tyr	Ile	Pro	Glu	Ser	Tyr	Lys	Asp	Arg	Met	Tyr	
785					790					795					800	
Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Gln	
				805				810						815		
Thr	Lys	Tyr	Lys	Asp	Tyr	Gln	Glu	Val	Gly	Ile	Ile	His	Gln	His	Asn	
			820					825					830			
Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Glu	Gly	Gln	

		835					840					845					
Ala	Tyr	Pro	Ala	Asn	Phe	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Thr	Ala	Val		
	850					855					860						
Asp	Ser	Ile	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Thr	Leu	Trp	Arg		
865					870					875					880		
Ile	Pro	Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu		
				885					890						895		
Gly	Gln	Asn	Leu	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr		
		900						905					910				
Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Val	Leu	Phe		
	915						920					925					
Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile		
930						935					940						
Glu	Thr	Val	Tyr	Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr		
945					950					955					960		

<210> 94

<211> 944

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 16 Hexon

<400> 94

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala		
1				5					10					15			
Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala		
		20						25					30				
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro		
	35					40					45						
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu		
50					55					60							
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr		
65					70				75						80		
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met		
			85					90						95			
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser		
		100						105					110				
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly		
	115					120					125						
Ala	Pro	Asn	Ser	Ser	Gln	Trp	Glu	Gln	Thr	Glu	Asn	Gly	Gly	Gly	Gln		
	130				135						140						
Ala	Thr	Thr	Lys	Thr	His	Thr	Tyr	Gly	Val	Ala	Pro	Met	Gly	Gly	Thr		
145					150					155					160		
Asn	Ile	Thr	Val	Asp	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Ala	Thr	Ala	Asp		
			165						170					175			
Thr	Glu	Lys	Pro	Ile	Tyr	Ala	Asp	Lys	Thr	Phe	Gln	Pro	Glu	Pro	Gln		
		180						185					190				
Ile	Gly	Glu	Glu	Asn	Trp	Gln	Glu	Thr	Glu	Ser	Phe	Tyr	Gly	Gly	Arg		
	195					200						205					
Ala	Leu	Lys	Lys	Asp	Thr	Asn	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe	Ala		
	210					215					220						
Arg	Pro	Thr	Asn	Glu	Lys	Gly	Gly	Gln	Ala	Lys	Leu	Lys	Val	Gly	Ala		
225					230					235					240		
Asp	Gly	Leu	Pro	Thr	Lys	Glu	Phe	Asp	Ile	Asp	Leu	Ala	Phe	Phe	Asp		
				245					250					255			

Thr	Pro	Gly	Gly	Thr	Val	Thr	Gly	Gly	Thr	Glu	Glu	Tyr	Lys	Ala	Asp
			260					265					270		
Ile	Val	Met	Tyr	Thr	Glu	Asn	Thr	Tyr	Leu	Glu	Thr	Pro	Asp	Thr	His
		275					280					285			
Val	Val	Tyr	Lys	Pro	Gly	Lys	Asp	Asn	Thr	Ser	Ser	Lys	Ile	Asn	Leu
	290					295					300				
Val	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp
305					310					315					320
Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val
			325					330						335	
Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp
		340					345						350		
Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp
		355					360					365			
Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp
	370					375					380				
Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Val	Glu	Asp	Glu	Leu	Pro
385					390					395					400
Asn	Tyr	Cys	Phe	Pro	Leu	Asp	Gly	Ser	Gly	Thr	Asn	Ala	Ala	Tyr	Gln
			405						410					415	
Gly	Val	Lys	Val	Lys	Asn	Gly	Gln	Asp	Gly	Asp	Val	Glu	Ser	Glu	Trp
		420					425							430	
Glu	Lys	Asp	Thr	Val	Ala	Ala	Arg	Asn	Gln	Leu	Cys	Lys	Gly	Asn	
		435				440					445				
Ile	Phe	Ala	Met	Glu	Ile	Asn	Leu	Gln	Ala	Asn	Leu	Trp	Arg	Ser	Phe
	450					455					460				
Leu	Tyr	Ser	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Ser	Tyr	Lys	Tyr	Thr
465					470					475					480
Pro	Ala	Asn	Ile	Thr	Leu	Pro	Thr	Asn	Thr	Asn	Thr	Tyr	Asp	Tyr	Met
			485						490					495	
Asn	Gly	Arg	Val	Val	Pro	Pro	Ser	Leu	Val	Asp	Ala	Tyr	Ile	Asn	Ile
			500					505					510		
Gly	Ala	Arg	Trp	Ser	Leu	Asp	Pro	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn
		515					520					525			
His	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn
	530					535					540				
Gly	Arg	Tyr	Val	Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala
545					550					555					560
Ile	Lys	Ser	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	
			565					570					575		
Phe	Arg	Lys	Asp	Val	Asn	Met	Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp
			580					585					590		
Leu	Arg	Thr	Asp	Gly	Ala	Ser	Ile	Ser	Phe	Thr	Ser	Ile	Asn	Leu	Tyr
		595					600					605			
Ala	Thr	Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala
	610					615						620			
Met	Leu	Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser
625					630					635					640
Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro
			645						650					655	
Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ser	Phe
		660						665					670		
Thr	Arg	Leu	Lys	Thr	Lys	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp
		675					680					685			
Pro	Tyr	Phe	Val	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe

690		695		700											
Tyr	Leu	Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Ile	Thr	Phe	Asp	Ser	Ser
705					710					715					720
Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu
				725						730					735
Ile	Lys	Arg	Thr	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn
			740					745					750		
Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	His	Tyr	Asn	Ile
		755					760				765				
Gly	Tyr	Gln	Gly	Phe	Tyr	Val	Pro	Glu	Gly	Tyr	Lys	Asp	Arg	Met	Tyr
	770					775					780				
Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu
785					790					795					800
Val	Asn	Tyr	Lys	Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn
				805					810					815	
Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln
			820					825					830		
Pro	Tyr	Pro	Ala	Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Ser	Ala	Val
	835					840					845				
Ala	Ser	Val	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Val	Met	Trp	Arg
	850					855					860				
Ile	Pro	Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu
865					870					875					880
Gly	Gln	Asn	Met	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Asn
				885					890					895	
Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Ser	Thr	Leu	Leu	Tyr	Val	Val	Phe
			900				905					910			
Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile
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<210> 95
 <211> 960
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 17 Hexon

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35 40 45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50 55 60
Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
65 70 75 80
Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85 90 95
Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
100 105 110
Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
115 120 125

Ala	Pro	Asn	Ser	Cys	Glu	Trp	Glu	Gln	Glu	Glu	Thr	Gln	Ala	Val	Glu
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Glu	Ala	Ala	Glu	Glu	Glu	Glu	Glu	Asp	Ala	Asp	Gly	Gln	Ala	Glu	Glu
145					150					155					160
Glu	Gln	Ala	Ala	Thr	Lys	Lys	Thr	His	Val	Tyr	Ala	Gln	Ala	Pro	Leu
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Ser	Gly	Glu	Lys	Ile	Ser	Lys	Asp	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Ala
			180					185					190		
Thr	Ala	Thr	Glu	Gln	Lys	Pro	Ile	Tyr	Ala	Asp	Pro	Thr	Phe	Gln	Pro
		195					200					205			
Glu	Pro	Gln	Ile	Gly	Glu	Ser	Gln	Trp	Asn	Glu	Ala	Asp	Ala	Thr	Val
	210					215					220				
Ala	Gly	Gly	Arg	Val	Leu	Lys	Lys	Ser	Thr	Pro	Met	Lys	Pro	Cys	Tyr
225					230					235					240
Gly	Ser	Tyr	Ala	Arg	Pro	Thr	Asn	Ala	Asn	Gly	Gly	Gln	Gly	Val	Leu
				245					250						255
Thr	Ala	Asn	Ala	Gln	Gly	Gln	Leu	Glu	Ser	Gln	Val	Glu	Met	Gln	Phe
			260					265					270		
Phe	Ser	Thr	Ser	Glu	Asn	Ala	Arg	Asn	Glu	Thr	Asn	Asn	Ile	Gln	Pro
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Lys	Leu	Val	Leu	Tyr	Ser	Glu	Asp	Val	His	Met	Glu	Thr	Pro	Asp	Thr
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His	Leu	Ser	Tyr	Lys	Pro	Ala	Lys	Ser	Asp	Asp	Asn	Ser	Lys	Ile	Met
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Leu	Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg
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Asp	Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly
			340					345					350		
Val	Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln
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Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Met	Gly
	370					375					380				
Asp	Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr
385					390					395					400
Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu
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Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Gly	Gly	Ile	Gly	Val	Thr	Asp	Thr	Tyr
			420					425					430		
Gln	Ala	Val	Lys	Thr	Asn	Asn	Gly	Asn	Asn	Gly	Gly	Gln	Val	Thr	Trp
		435					440					445			
Thr	Lys	Asp	Glu	Thr	Phe	Ala	Asp	Arg	Asn	Glu	Ile	Gly	Val	Gly	Asn
	450					455					460				
Asn	Phe	Ala	Met	Glu	Ile	Asn	Leu	Ser	Ala	Asn	Leu	Trp	Arg	Asn	Phe
465					470					475					480
Leu	Tyr	Ser	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Lys	Leu	Lys	Tyr	Asn
				485					490					495	
Pro	Ser	Asn	Val	Asp	Ile	Ser	Asp	Asn	Pro	Asn	Thr	Tyr	Asp	Tyr	Met
			500					505					510		
Asn	Lys	Arg	Val	Val	Ala	Pro	Gly	Leu	Val	Asp	Cys	Tyr	Ile	Asn	Leu
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Gly	Ala	Arg	Trp	Ser	Leu	Asp	Tyr	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn
	530					535					540				
His	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn
545					550					555					560
Gly	Arg	Tyr	Val	Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala

				565					570					575			
Ile	Lys	Asn	Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn		
			580					585					590				
Phe	Arg	Lys	Asp	Val	Asn	Met	Val	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp		
		595					600					605					
Leu	Arg	Val	Asp	Gly	Ala	Ser	Ile	Lys	Phe	Glu	Ser	Ile	Cys	Leu	Tyr		
	610					615					620						
Ala	Thr	Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala		
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Met	Leu	Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser		
			645					650					655				
Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro		
		660						665					670				
Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ala	Phe		
		675					680					685					
Thr	Arg	Leu	Lys	Thr	Lys	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp		
	690					695					700						
Pro	Tyr	Tyr	Thr	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe		
705					710				715						720		
Tyr	Leu	Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Val	Thr	Phe	Asp	Ser	Ser		
			725					730					735				
Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu		
		740						745					750				
Ile	Lys	Arg	Ser	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn		
		755					760					765					
Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	Asn	Tyr	Asn	Ile		
	770					775					780						
Gly	Tyr	Gln	Gly	Phe	Tyr	Ile	Pro	Glu	Ser	Tyr	Lys	Asp	Arg	Met	Tyr		
785					790					795					800		
Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Gln		
			805					810						815			
Thr	Lys	Tyr	Lys	Asp	Tyr	Gln	Glu	Val	Gly	Ile	Ile	His	Gln	His	Asn		
		820					825						830				
Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Glu	Gly	Gln		
		835					840					845					
Ala	Tyr	Pro	Ala	Asn	Phe	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Thr	Ala	Val		
	850					855					860						
Asp	Ser	Ile	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Thr	Leu	Trp	Arg		
865					870					875					880		
Ile	Pro	Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Ser	Asp	Leu		
			885					890						895			
Gly	Gln	Asn	Leu	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr		
		900					905						910				
Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Val	Leu	Phe		
	915						920					925					
Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile		
	930					935					940						
Glu	Thr	Val	Tyr	Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr		
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<210> 96
 <211> 958
 <212> PRT
 <213> Chimpanzee Adenovirus- ChAd 19 Hexon

<400> 96

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Arg	Ala	Thr	Glu	Ser	Tyr	Phe	Ser	Leu	Ser	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50					55					60				
Thr	Leu	Arg	Phe	Ile	Pro	Val	Asp	Arg	Glu	Asp	Thr	Ala	Tyr	Ser	Tyr
65					70					75					80
Lys	Ala	Arg	Phe	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85					90					95	
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Thr
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Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Ser	Cys	Glu	Trp	Glu	Gln	Leu	Glu	Glu	Ala	Gln	Ala	Ala
	130					135					140				
Leu	Glu	Asp	Glu	Glu	Leu	Glu	Asp	Glu	Asp	Glu	Glu	Pro	Gln	Asp	Glu
145					150					155					160
Ala	Pro	Val	Lys	Lys	Thr	His	Val	Tyr	Ala	Gln	Ala	Pro	Leu	Ser	Gly
				165					170					175	
Glu	Glu	Ile	Thr	Lys	Asp	Gly	Leu	Gln	Ile	Gly	Ser	Asp	Asn	Thr	Glu
			180					185					190		
Ala	Gln	Ser	Lys	Pro	Ile	Tyr	Ala	Asp	Pro	Thr	Phe	Gln	Pro	Glu	Pro
		195					200					205			
Gln	Ile	Gly	Glu	Ser	Gln	Trp	Asn	Glu	Ala	Asp	Ala	Thr	Val	Ala	Gly
	210					215					220				
Gly	Arg	Val	Leu	Lys	Lys	Thr	Thr	Pro	Met	Lys	Pro	Cys	Tyr	Gly	Ser
225					230					235					240
Tyr	Ala	Arg	Pro	Thr	Asn	Ala	Asn	Gly	Gly	Gln	Gly	Val	Leu	Val	Ala
				245					250					255	
Asp	Asp	Lys	Gly	Val	Leu	Gln	Ser	Lys	Val	Glu	Leu	Gln	Phe	Phe	Ser
		260						265					270		
Asn	Thr	Thr	Thr	Leu	Asn	Gln	Arg	Glu	Gly	Asn	Asp	Thr	Lys	Pro	Lys
		275					280					285			
Val	Val	Leu	Tyr	Ser	Glu	Asp	Val	His	Met	Glu	Thr	Pro	Asp	Thr	His
	290					295					300				
Ile	Ser	Tyr	Lys	Pro	Thr	Lys	Ser	Asp	Asp	Asn	Ser	Lys	Val	Met	Leu
305					310					315					320
Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp
				325					330					335	
Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val
			340					345					350		
Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp
		355					360					365			
Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Met	Gly	Asp
	370					375					380				
Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp
385					390					395					400
Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu	Pro
				405					410					415	
Asn	Tyr	Cys	Phe	Pro	Leu	Gly	Gly	Ile	Gly	Val	Thr	Asp	Thr	Tyr	Gln

Ile	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Thr	Leu	Trp	Arg	Ile	Pro
865					870					875					880
Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln
				885					890						895
Asn	Leu	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr	Phe	Glu
			900					905					910		
Val	Asp	Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Val	Leu	Phe	Glu	Val
		915					920					925			
Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Thr
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<210> 97
 <211> 2865
 <212> DNA
 <213> Chimpanzee Adenovirus- ChAd 8 Hexon

<400> 97

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cccgttcaag	atgatgctga	acaagctcag	gaacaaaaag	atgttaccta	tacttttggc	480
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aatgaccagt	cattcaacga	ctacctctct	gcagccaaca	tgctctaccc	catccctgcc	1980
aatgccacta	acattcccat	ctccattccc	tctcgaact	gggctgcctt	caggggctgg	2040
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<210> 98

<211> 954

<212> PRT

<213> Chimpanzee Adenovirus ChAd 8

<400> 98

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Arg Ala Thr Asp Thr Tyr Phe Asn Leu Gly Asn Lys Phe Arg Asn Pro
35     40     45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50     55     60
Met Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65     70     75     80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85     90     95
Ala Ser Thr Phe Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser
100    105    110
Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
115    120    125
Ala Pro Asn Thr Cys Gln Trp Ile Ala Lys Gly Ser Pro Val Gln Asp
130    135    140
Asp Ala Glu Gln Ala Gln Glu Gln Lys Asp Val Thr Tyr Thr Phe Gly
145    150    155    160
Asn Ala Pro Val Lys Ala Glu Asp Asp Ile Thr Lys Asp Gly Leu Glu
165    170    175
Val Gly Ile Gln Ile Ile Gly Asp Glu Glu Asn Pro Ile Tyr Ala Asp
180    185    190
Lys Thr Tyr Gln Pro Glu Pro Gln Val Gly Asp Glu Gln Trp His Asp
195    200    205
Thr Thr Gly Thr Thr Glu Gln Tyr Gly Gly Arg Ala Leu Lys Pro Ala
210    215    220
Thr Asn Met Arg Pro Cys Tyr Gly Ser Phe Ala Arg Pro Thr Asn Lys
225    230    235    240
Lys Gly Gly Gln Ala Lys Thr Arg Lys Val Glu Lys Thr Glu Gly Asp
245    250    255
Lys Lys Thr Glu Val Glu Glu Leu Asp Ile Asp Met Asp Phe Tyr Asp
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Ala Arg Ser Lys Lys Gln Gly Tyr Asp Pro Gln Ile Val Leu Tyr Ser

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<210> 99
<211> 2871
<212> DNA
<213> Chimpanzee Adenovirus- ChAd 22 Hexon
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- 144 -

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<210> 100

<211> 956

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 22 Hexon

<400> 100

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Arg Ala Thr Asp Thr Tyr Phe Asn Leu Gly Asn Lys Phe Arg Asn Pro
35        40        45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50        55        60
Met Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65        70        75        80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85        90        95
Ala Ser Thr Phe Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser
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Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
115       120       125
Ala Pro Asn Thr Ser Gln Trp Ile Ala Glu Gly Val Lys Lys Glu Asn

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Gly Asp Ile Thr Lys Asp Lys Gly Leu Pro Ile Gly Ser Glu Ile Thr				
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Asp Gly Glu Ala Lys Pro Ile Tyr Ala Asp Lys Leu Tyr Gln Pro Glu				
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Pro Gln Val Gly Glu Glu Thr Trp Thr Asp Thr Asp Gly Thr Thr Glu				
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Tyr Gly Ser Phe Ala Lys Pro Thr Asn Val Lys Gly Gly Gln Ala Lys				
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Gln Lys Thr Thr Glu Gln Leu Gln Asn Gln Gln Val Glu Tyr Asp Ile				
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Asp Met Asn Phe Phe Asp Gln Ala Ser Gln Lys Ala Asn Phe Ser Pro				
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Lys Ile Val Met Tyr Ala Glu Asn Val Asp Leu Glu Thr Pro Asp Thr				
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His Val Val Tyr Lys Pro Gly Thr Ser Glu Glu Ser Ser His Ala Asn				
305		310		320
Leu Gly Gln Gln Ser Met Pro Asn Arg Pro Asn Tyr Ile Gly Phe Arg				
	325		330	335
Asp Asn Phe Ile Gly Leu Met Tyr Tyr Asn Ser Thr Gly Asn Met Gly				
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Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln				
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Asp Pro Asp Val Arg Ile Ile Glu Asn His Gly Val Glu Asp Glu Leu				
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Pro Asn Tyr Cys Phe Pro Leu Asp Gly Val Gly Val Pro Thr Thr Ser				
	420		425	430
Tyr Lys Ile Ile Glu Pro Asn Gly Glu Gly Ala Asp Trp Lys Glu Pro				
	435		440	445
Asp Ile Asn Gly Thr Ser Glu Ile Gly Gln Gly Asn Leu Phe Ala Met				
	450		455	460
Glu Ile Asn Leu Gln Ala Asn Leu Trp Arg Ser Phe Leu Tyr Ser Asn				
465		470		480
Val Ala Leu Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Pro Ala Asn Val				
	485		490	495
Thr Leu Pro Thr Asn Thr Asn Thr Tyr Asp Tyr Met Asn Gly Arg Val				
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Val Pro Pro Ser Leu Val Asp Thr Tyr Val Asn Ile Gly Ala Arg Trp				
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Ser Leu Asp Ala Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn				
	530		535	540
Ala Gly Leu Arg Tyr Arg Ser Met Leu Leu Gly Asn Gly Arg Tyr Val				
545		550		560
Pro Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Val Lys Asn Leu				
	565		570	575

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Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu	Arg	Asn	
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Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met	
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Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro	
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Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	
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Val	Gly	Tyr	Met	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Ala	Tyr	Pro	Ala	
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Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Thr	Met	Trp	Arg	Ile	Pro	Phe	Ser	
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Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln	Asn	Leu	
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Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr	Phe	Glu	Val	Asp	
			900					905					910			
Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Leu	Leu	Phe	Glu	Val	Phe	Asp	
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Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr	
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<210> 101

<211> 2865

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 24 Hexon

<400> 101

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<210> 102

<211> 954

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 24 Hexon

<400> 102

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			20					25					30		
Arg	Ala	Thr	Glu	Ser	Tyr	Phe	Ser	Leu	Ser	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50					55				60					
Thr	Leu	Arg	Phe	Ile	Pro	Val	Asp	Arg	Glu	Asp	Thr	Ala	Tyr	Ser	Tyr
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Lys	Ala	Arg	Phe	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
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Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Thr
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Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Pro	Cys	Glu	Trp	Asp	Glu	Ala	Ala	Thr	Ala	Leu	Asp	Ile
	130					135					140				
Asp	Leu	Asn	Ala	Glu	Glu	Asp	Glu	Glu	Gly	Asp	Glu	Ala	Gln	Gly	Glu
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Ala	Asp	Gln	Gln	Lys	Thr	His	Val	Phe	Gly	Gln	Ala	Pro	Tyr	Ser	Gly
				165					170					175	
Gln	Asn	Ile	Thr	Lys	Glu	Gly	Ile	Gln	Ile	Gly	Ile	Asp	Ala	Thr	Ser
			180					185					190		
Gln	Ala	Gln	Thr	Pro	Leu	Tyr	Ala	Asp	Lys	Thr	Phe	Gln	Pro	Glu	Pro
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Tyr	Ala	Arg	Pro	Thr	Asn	Glu	Asn	Gly	Gly	Gln	Gly	Ile	Leu	Leu	Glu
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Leu	Tyr	Ser	Glu	Asp	Val	Asn	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile	Ser
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Tyr	Met	Pro	Thr	Asn	Asn	Glu	Thr	Asn	Ser	Arg	Glu	Leu	Leu	Gly	Gln
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Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Met	Gly	Asp	Arg	Thr
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Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu	Pro	Asn	Tyr
				405					410					415	
Cys	Phe	Pro	Leu	Gly	Gly	Ile	Ile	Asn	Thr	Glu	Thr	Phe	Thr	Lys	Val
			420					425					430		

Lys	Pro	Lys	Ala	Gly	Gln	Asp	Ala	Gln	Trp	Glu	Lys	Asp	Ser	Glu	Phe
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Ser	Asp	Lys	Asn	Glu	Ile	Arg	Val	Gly	Asn	Asn	Phe	Ala	Met	Glu	Ile
	450					455					460				
Asn	Ile	Asn	Ala	Asn	Leu	Trp	Arg	Asn	Phe	Leu	Tyr	Ser	Asn	Val	Ala
465					470					475					480
Leu	Tyr	Leu	Pro	Asp	Lys	Leu	Lys	Tyr	Thr	Pro	Ser	Asn	Val	Gln	Ile
				485					490					495	
Ser	Asn	Asn	Pro	Asn	Ser	Tyr	Asp	Tyr	Met	Asn	Lys	Arg	Val	Val	Ala
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Pro	Gly	Leu	Val	Asp	Cys	Tyr	Ile	Asn	Leu	Gly	Ala	Arg	Trp	Ser	Leu
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Asp	Tyr	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	His	His	Arg	Asn	Ala	Gly
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Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val	Pro	Phe
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His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	Asn	Leu	Leu	Leu
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Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu	Arg	Asn	Asp	Thr
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Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met	Leu	Tyr
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Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro	Ser	Arg
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Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ala	Phe	Thr	Arg	Leu	Lys	Thr	Lys
	675						680					685			
Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	Pro	Tyr	Tyr	Thr	Tyr	Ser
	690					695					700				
Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	Tyr	Leu	Asn	His	Thr	Phe
705					710					715					720
Lys	Lys	Val	Ser	Val	Thr	Phe	Asp	Ser	Ser	Val	Ser	Trp	Pro	Gly	Asn
				725					730					735	
Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	Ile	Lys	Arg	Ser	Val	Asp
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Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	Trp	Phe
		755					760					765			
Leu	Val	Gln	Met	Leu	Ala	Asn	Tyr	Asn	Ile	Gly	Tyr	Gln	Gly	Phe	Tyr
	770					775					780				
Ile	Pro	Glu	Ser	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg	Asn	Phe
785					790					795					800
Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Gln	Thr	Lys	Tyr	Lys	Asp	Tyr
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Gln	Glu	Val	Gly	Ile	Ile	His	Gln	His	Asn	Asn	Ser	Gly	Phe	Val	Gly
			820					825					830		
Tyr	Leu	Ala	Pro	Thr	Met	Arg	Glu	Gly	Gln	Ala	Tyr	Pro	Ala	Asn	Phe
		835					840					845			
Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Thr	Ala	Val	Asp	Ser	Ile	Thr	Gln	Lys
	850					855					860				
Lys	Phe	Leu	Cys	Asp	Arg	Thr	Leu	Trp	Arg	Ile	Pro	Phe	Ser	Ser	Asn

865		870		875		880
Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Leu Leu Tyr						
		885		890		895
Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val Asp Pro Met						
	900		905		910	
Asp Glu Pro Thr Leu Leu Tyr Val Leu Phe Glu Val Phe Asp Val Val						
	915		920		925	
Arg Val His Gln Pro His Arg Gly Val Ile Glu Thr Val Tyr Leu Arg						
	930		935		940	
Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr						
945		950				

<210> 103

<211> 2841

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 26 Hexon

<400> 103

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<210> 104

<211> 946

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 26 Hexon

<400> 104

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35     40     45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50     55     60
Thr Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65     70     75     80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85     90     95
Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser
100    105    110
Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
115    120    125
Ala Pro Asn Ser Ser Gln Trp Glu Gln Lys Lys Thr Gly Asn Asn Asn
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Gly Glu Asn Ile Thr Lys Glu Gly Leu Gln Ile Gly Ser Asp Glu Thr
165    170    175
Lys Thr Asp Asn Lys Glu Ile Tyr Ala Asp Lys Thr Tyr Gln Pro Glu
180    185    190
Pro Gln Ile Gly Glu Glu Asn Trp Gln Glu Thr Phe Ser Phe Tyr Gly
195    200    205
Gly Arg Ala Leu Lys Lys Asp Thr Lys Met Lys Pro Cys Tyr Gly Ser
210    215    220
Phe Ala Arg Pro Thr Asn Glu Lys Gly Gly Gln Ala Lys Phe Lys Val
225    230    235    240
Gln Asp Gly Val Gln Thr Thr Glu Tyr Asp Ile Asp Leu Ala Phe Phe
245    250    255
Asp Ile Pro Ser Thr Gly Thr Gly Gly Asn Gly Thr Asn Val Asn Asp
260    265    270
Lys Pro Asp Met Val Met Tyr Thr Glu Asn Val Asn Leu Glu Thr Pro
275    280    285

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Leu	Gln	Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser
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Glu	Leu	Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Asp	Gly	Ala	Gly	Thr	Asn	Ala
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Glu	Ala	Met	Leu	Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr
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Leu	Ser	Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn
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Val	Pro	Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp
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Ser	Ser	Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu


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<210> 106

<211> 945

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 30 Hexon

<400> 106

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Arg Ala Thr Asp Thr Tyr Phe Asn Leu Gly Asn Lys Phe Arg Asn Pro
35     40     45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50     55     60
Met Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65     70     75     80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85     90     95
Ala Ser Thr Phe Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser
100    105    110
Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
115    120    125
Ala Pro Asn Pro Ser Gln Trp Leu Glu Gln Ser Thr Thr Glu Gly Glu
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Pro	Gln	Val	Gly	Glu	Glu	Thr	Trp	Thr	Asp	Thr	Asp	Gly	Thr	Asn	Glu
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Lys	Phe	Gly	Gly	Arg	Thr	Leu	Lys	Ser	Ala	Thr	Asn	Met	Lys	Pro	Cys
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Thr	Arg	Lys	Val	Ala	Ala	Val	Asp	Gly	Gly	Glu	Glu	Thr	Glu	Glu	Pro
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Asp	Ile	Asp	Met	Val	Phe	Tyr	Asp	Asp	Arg	Gly	Ala	Thr	Glu	Ala	Met
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Met	Ala	Pro	Glu	Val	Val	Leu	Tyr	Ala	Glu	Asn	Val	Asn	Leu	Glu	Thr
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Pro	Asp	Thr	His	Val	Val	Tyr	Lys	Pro	Gly	Thr	Ser	Asp	Ile	Asn	Ser
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Phe	Leu	Tyr	Ser	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Ala	Tyr	Lys	Tyr
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Thr	Pro	Ala	Asn	Ile	Thr	Leu	Pro	Ala	Asn	Thr	Asn	Thr	Tyr	Glu	Tyr
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Asn	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	
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Ala	Ile	Lys	Asn	Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp
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<210> 108

<211> 958

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 31 Hexon

<400> 108

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Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
			20					25					30		
Arg	Ala	Thr	Glu	Ser	Tyr	Phe	Ser	Leu	Ser	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50					55					60				
Thr	Leu	Arg	Phe	Ile	Pro	Val	Asp	Arg	Glu	Asp	Thr	Ala	Tyr	Ser	Tyr
65				70						75					80
Lys	Ala	Arg	Phe	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85					90					95	
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Thr
			100					105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Ser	Cys	Glu	Trp	Glu	Gln	Leu	Glu	Glu	Ala	Gln	Ala	Ala
	130					135					140				
Val	Glu	Asp	Glu	Glu	Leu	Glu	Asp	Glu	Asp	Glu	Glu	Pro	Gln	Asp	Glu
145					150					155					160
Ala	Pro	Val	Lys	Lys	Thr	His	Val	Tyr	Ala	Gln	Ala	Pro	Leu	Ser	Gly
				165					170					175	
Glu	Glu	Ile	Thr	Lys	Asn	Gly	Leu	Gln	Ile	Gly	Ser	Asp	Asn	Thr	Glu
			180					185					190		
Ala	Gln	Ser	Lys	Pro	Ile	Tyr	Ala	Asp	Pro	Thr	Phe	Gln	Pro	Glu	Pro
		195					200					205			
Gln	Ile	Gly	Glu	Ser	Gln	Trp	Asn	Glu	Ala	Asp	Ala	Thr	Val	Ala	Gly
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Gly	Arg	Val	Leu	Lys	Lys	Ser	Thr	Pro	Met	Lys	Pro	Cys	Tyr	Gly	Ser
225					230					235					240
Tyr	Ala	Arg	Pro	Thr	Asn	Ser	Asn	Gly	Gly	Gln	Gly	Val	Leu	Val	Ala
				245					250					255	
Asp	Asp	Lys	Gly	Val	Leu	Gln	Ser	Lys	Val	Glu	Leu	Gln	Phe	Phe	Ser
			260					265					270		
Asn	Thr	Thr	Thr	Leu	Asn	Gln	Arg	Glu	Gly	Asn	Asp	Thr	Lys	Pro	Lys
		275					280					285			
Val	Val	Leu	Tyr	Ser	Glu	Asp	Val	His	Met	Glu	Thr	Pro	Asp	Thr	His
	290					295					300				
Ile	Ser	Tyr	Lys	Pro	Thr	Lys	Ser	Asp	Asp	Asn	Ser	Lys	Ile	Met	Leu
305					310					315					320
Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp
				325					330					335	
Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val
			340					345					350		
Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	Asp
		355					360					365			
Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Met	Gly	Asp
		370				375					380				
Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp
385					390					395					400
Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu	Pro
				405					410					415	
Asn	Tyr	Cys	Phe	Pro	Leu	Gly	Gly	Ile	Gly	Val	Thr	Asp	Thr	Tyr	Gln
			420					425					430		
Ala	Ile	Lys	Thr	Asn	Gly	Asn	Gly	Gln	Glu	Asn	Pro	Thr	Trp	Glu	Lys

Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Ser	Asp	Leu	Gly	Gln
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Asn	Leu	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr	Phe	Glu
			900					905					910		
Val	Asp	Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Val	Leu	Phe	Glu	Val
		915					920					925			
Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Thr
	930					935					940				
Val	Tyr	Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr		
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<210> 109

<211> 2856

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 37 Hexon

<400> 109

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ctggggaaca	agtttaggaa	ccccaccgtg	gcccctaccc	acgatgtgac	caccgaccgt	180
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<210> 110

<211> 951

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 37 Hexon

<400> 110

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Arg Ala Thr Asp Thr Tyr Phe Asn Leu Gly Asn Lys Phe Arg Asn Pro
35     40     45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50     55     60
Met Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65     70     75     80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85     90     95
Ala Ser Thr Phe Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser
100    105    110
Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
115    120    125
Ala Pro Asn Thr Cys Gln Trp Ile Ala Lys Gly Ala Pro Val Thr Asp
130    135    140
Gln Asp Asn Glu Glu Gln Glu Leu Thr Asp Val Thr Tyr Ala Phe Gly
145    150    155    160
Asn Ala Pro Val Gln Ala Glu Ala Lys Ile Thr Lys Asp Gly Leu Pro
165    170    175
Val Gly Leu Glu Ile Thr Glu Asp Glu Gln Lys Ser Ile Tyr Ala Asp
180    185    190
Lys Leu Tyr Gln Pro Glu Pro Gln Ile Gly Asp Glu Gln Trp His Asp
195    200    205
Thr Thr Gly Thr Asn Glu Gln Tyr Gly Gly Arg Ala Leu Lys Pro Ala
210    215    220
Thr Asn Met Lys Pro Cys Tyr Gly Ser Phe Ala Arg Pro Thr Asn Lys
225    230    235    240
Lys Gly Gly Gln Ala Lys Thr Arg Lys Ile Glu Lys Glu Glu Asn Gly
245    250    255
Val Lys Thr Val Thr Glu Glu Ala Asp Ile Asp Met Asp Phe Tyr Asp
260    265    270
Leu Arg Ser Gln Arg Ala Asn Phe Asp Pro Lys Ile Val Leu Tyr Ser
275    280    285
Glu Asn Val Asn Leu Glu Thr Pro Asp Thr His Ile Val Tyr Lys Pro

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290		295		300
Gly Thr Asp Glu Thr Ser	Ser Ser Val Asn Leu Gly Gln Gln Ala Met			
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Pro Asn Arg Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu				
	325	330	335	
Met Phe Tyr Asn Ser Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala				
	340	345	350	
Ser Gln Leu Asn Ala Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu				
	355	360	365	
Ser Tyr Gln Leu Leu Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe				
	370	375	380	
Ser Met Trp Asn Gln Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Ile				
385	390	395	400	
Ile Glu Asn His Gly Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro				
	405	410	415	
Leu Asp Gly Val Gly Pro Ile Thr Gly Thr Tyr Gln Gly Val Glu Pro				
	420	425	430	
Asp Gly Asn Asn Gly Asn Trp Lys Lys Asn Thr Asn Ile Asn Gly Ala				
	435	440	445	
Asn Glu Ile Gly Lys Gly Asn Asn Tyr Ala Met Glu Ile Asn Leu Gln				
	450	455	460	
Ala Asn Leu Trp Arg Ser Phe Leu Tyr Ser Asn Val Ala Leu Tyr Leu				
465	470	475	480	
Pro Asp Gly Tyr Lys Tyr Thr Pro Ala Asn Val Thr Leu Pro Glu Asn				
	485	490	495	
Lys Asn Thr Tyr Gly Tyr Ile Asn Gly Arg Val Val Ser Pro Ser Leu				
	500	505	510	
Val Asp Ser Tyr Ile Asn Ile Gly Ala Arg Trp Ser Leu Asp Leu Met				
	515	520	525	
Asp Asn Val Asn Pro Phe Asn His His Arg Asn Ala Gly Leu Arg Tyr				
	530	535	540	
Arg Ser Met Leu Leu Gly Asn Gly Arg Tyr Val Pro Phe His Ile Gln				
545	550	555	560	
Val Pro Gln Lys Ile Phe Ala Val Lys Asn Leu Leu Leu Leu Pro Gly				
	565	570	575	
Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp Val Asn Met Val Leu				
	580	585	590	
Gln Ser Ser Leu Gly Asn Asp Leu Arg Thr Asp Gly Ala Ser Ile Ser				
	595	600	605	
Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala His Asn				
	610	615	620	
Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn Asp Gln				
625	630	635	640	
Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro Ile Pro				
	645	650	655	
Ala Asn Ala Thr Asn Ile Pro Ile Ser Ile Pro Ser Arg Asn Trp Ala				
	660	665	670	
Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Lys Glu Thr Pro				
	675	680	685	
Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly Ser Ile				
	690	695	700	
Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys Lys Val				
705	710	715	720	
Ser Ile Met Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp Arg Leu				
	725	730	735	

Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly Glu Gly
 740 745 750
 Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu Val Gln
 755 760 765
 Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Ile Pro Glu
 770 775 780
 Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln Pro Met
 785 790 795 800
 Ser Arg Gln Val Val Asp Glu Ile Asn Tyr Lys Glu Tyr Gln Ala Val
 805 810 815
 Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr His Ala
 820 825 830
 Pro Thr Leu Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro Tyr Pro
 835 840 845
 Leu Ile Gly Thr Thr Ala Val Thr Ser Val Thr Gln Lys Lys Phe Leu
 850 855 860
 Cys Asp Arg Thr Met Trp Arg Ile Pro Phe Ser Ser Asn Phe Met Ser
 865 870 875 880
 Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala Asn Ser
 885 890 895
 Ala His Ala Leu Asp Met Thr Phe Glu Val Asp Pro Met Asp Glu Pro
 900 905 910
 Thr Leu Leu Tyr Leu Leu Phe Glu Val Phe Asp Val Val Arg Val His
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 930 935 940
 Ser Ala Gly Asn Ala Thr Thr
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<210> 111

<211> 2817

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 38 Hexon

<400> 111

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<210> 112

<211> 938

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 38 Hexon

<400> 112

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20          25          30
Arg Ala Thr Asp Thr Tyr Phe Ser Leu Gly Asn Lys Phe Arg Asn Pro
35          40          45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50          55          60
Thr Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65          70          75          80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85          90          95
Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser
100         105         110
Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ala Leu Ala Pro Lys Ala
115         120         125
Ala Pro Asn Pro Ser Gln Trp Glu Glu Thr Thr Thr Gly Thr Asp Gly
130         135         140
Asn Ala Ala Thr Thr Thr Thr His Ser Phe Gly Leu Ala Ala Met Lys
145         150         155         160

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Gly	Asp	Asn	Ile	Thr	Ser	Asp	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Ala	Thr	
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Ser	Gly	Glu	Glu	Lys	Pro	Ile	Tyr	Ala	Asp	Lys	Leu	Tyr	Gln	Pro	Glu	
			180					185					190			
Pro	Gln	Ile	Gly	Glu	Glu	Ser	Trp	Thr	Asp	Thr	Asp	Gly	Thr	Asn	Glu	
		195					200					205				
Lys	Phe	Gly	Gly	Arg	Val	Leu	Lys	Lys	Asp	Thr	Ser	Met	Lys	Pro	Cys	
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Tyr	Gly	Ser	Phe	Ala	Lys	Pro	Thr	Asn	Asn	Lys	Gly	Gly	Gln	Ala	Lys	
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Gln	Lys	Ala	Thr	Glu	Gly	Thr	Ala	Val	Glu	Tyr	Asp	Val	Asp	Met	Asn	
			245						250					255		
Phe	Phe	Asp	Gly	Arg	Asp	Ala	Ala	Ala	Asn	Phe	Thr	Pro	Glu	Val	Val	
		260						265					270			
Leu	Tyr	Ala	Glu	Asn	Val	Asp	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile	Val	
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Tyr	Lys	Pro	Gly	Thr	Ser	Asp	Val	Ser	Ser	His	Val	Asn	Leu	Gly	Gln	
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Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp	Arg	Thr	
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Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro	Asp	
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Cys	Phe	Pro	Ile	Asp	Ala	Val	Gly	Ile	Thr	Arg	Thr	Tyr	Gln	Gly	Ile	
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Lys	Thr	Gln	Asn	Gly	Gln	Thr	Thr	Thr	Thr	Glu	Lys	Asp	Thr	Ser	Val	
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Asn	Ile	Gln	Ala	Asn	Leu	Trp	Arg	Asn	Phe	Leu	Tyr	Ala	Asn	Val	Ala	
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Pro	Thr	Asn	Thr	Asn	Thr	Tyr	Asp	Tyr	Met	Asn	Gly	Arg	Val	Val	Ala	
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Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val	Pro	Phe	
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His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	Ser	Leu	Leu	Leu	
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Pro Ile Pro Ala Asn Ala Thr Asn Val Pro Ile Ser Ile Pro Ser Arg		
645	650	655
Asn Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Lys		
660	665	670
Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser		
675	680	685
Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe		
690	695	700
Lys Lys Val Ser Ile Thr Phe Asp Ser Ser Val Ser Trp Pro Gly Asn		
705	710	715
Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp		
725	730	735
Gly Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe		
740	745	750
Leu Val Gln Met Leu Ala His Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr		
755	760	765
Val Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe		
770	775	780
Gln Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Tyr		
785	790	795
Gln Ala Val Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly		
805	810	815
Tyr Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr		
820	825	830
Pro Tyr Pro Leu Ile Gly Lys Ser Ala Val Thr Ser Val Thr Gln Lys		
835	840	845
Lys Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn		
850	855	860
Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr		
865	870	875
Ala Asn Ser Ala His Ala Leu Asp Met Asn Phe Glu Val Asp Pro Met		
885	890	895
Asp Glu Ser Thr Leu Leu Tyr Val Val Phe Glu Val Phe Asp Val Val		
900	905	910
Arg Val His Gln Pro His Arg Gly Val Ile Glu Ala Val Tyr Leu Arg		
915	920	925
Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr		
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<210> 113

<211> 2781

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 44 Hexon

<400> 113

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ctggggaaca agtttaggaa cccacgggtg gcgccacgc acgatgtgac caccgaccgc 180
agccagcggc tgacgctgcg cttcgtgccc gtggaccgag aggacaacac ctactcgtac 240

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<210> 114

<211> 926

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 44 Hexon

<400> 114

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             20             25             30
Arg Ala Thr Asp Thr Tyr Phe Ser Leu Gly Asn Lys Phe Arg Asn Pro

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Arg	Val	Val	Pro	Pro	Ser	Leu	Val	Asp	Ala	Tyr	Ile	Asn	Ile	Gly	Ala	
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			500					505					510			
Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	
		515					520					525				
Phe	Val	Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	
	530					535					540					
Ser	Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	
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Lys	Asp	Val	Asn	Met	Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg	
				565					570					575		
Thr	Asp	Gly	Ala	Ser	Ile	Ser	Phe	Thr	Ser	Ile	Asn	Leu	Tyr	Ala	Thr	
			580					585					590			
Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu	
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Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	
	610					615				620						
Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser	
625					630					635					640	
Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ser	Phe	Thr	Arg	
				645					650					655		
Leu	Lys	Thr	Lys	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	Pro	Tyr	
			660					665					670			
Phe	Val	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	Tyr	Leu	
		675					680					685				
Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Ile	Thr	Phe	Asp	Ser	Ser	Val	Ser	
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Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	Ile	Lys	
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Arg	Thr	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr	
				725					730					735		
Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	His	Tyr	Asn	Ile	Gly	Tyr	
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Gln	Gly	Phe	Tyr	Val	Pro	Glu	Gly	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe	
		755					760					765				
Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Val	Asn	
	770					775					780					
Tyr	Lys	Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn	Asn	Ser	
785					790					795					800	
Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Pro	Tyr	
				805					810					815		
Pro	Ala	Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Ser	Ala	Val	Thr	Ser	
				820				825					830			
Val	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Val	Met	Trp	Arg	Ile	Pro	
		835					840					845				
Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln	
	850					855					860					
Asn	Met	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Asn	Phe	Glu	
865					870					875					880	
Val	Asp	Pro	Met	Asp	Glu	Ser	Thr	Leu	Leu	Tyr	Val	Val	Phe	Glu	Val	
				885					890					895		
Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala	
			900					905					910			
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915

920

925

<210> 115

<211> 2877

<212> DNA

<213> Chimpanzee Adenovirus- ChAd 63 Hexon

<400> 115

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<210> 116

<211> 941

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 63 Hexon

<400> 116

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		35					40					45				
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Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met	
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Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp	Arg	Thr	Arg	Tyr	Phe	Ser	
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Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro	Asp	Val	Arg	Ile	Ile
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Asn	Gly	Val	Gly	Phe	Thr	Asp	Thr	Tyr	Gln	Gly	Val	Lys	Val	Lys	Thr
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Thr	Thr	Val	Ser	Thr	Ala	Asn	Glu	Ile	His	Ser	Gly	Asn	Pro	Phe	Ala
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465					470					475					480
Ile	Thr	Leu	Pro	Thr	Asn	Thr	Asn	Thr	Tyr	Asp	Tyr	Met	Asn	Gly	Arg
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Val	Val	Ala	Pro	Ser	Leu	Val	Asp	Ala	Tyr	Ile	Asn	Ile	Gly	Ala	Arg
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Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	Lys
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Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Val	Asn	Tyr
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Lys	Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn	Asn	Ser	Gly


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<210> 118

<211> 936

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 82 Hexon

<400> 118

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Arg Ala Thr Asp Thr Tyr Phe Ser Leu Gly Asn Lys Phe Arg Asn Pro
35      40      45
Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50      55      60
Thr Leu Arg Phe Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr
65      70      75      80
Lys Val Arg Tyr Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
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Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly
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Ala Pro Asn Ser Ser Gln Trp Glu Gln Asn Glu Asn Asn Gly Gln Gly
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Gln Ala Lys Thr His Thr Tyr Gly Val Ala Ala Met Gly Gly Leu Asp
145     150     155     160
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165     170     175
Asp Asn Glu Ile Tyr Ala Asp Lys Thr Tyr Gln Pro Glu Pro Gln Ile
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Gly Glu Glu Asn Trp Gln Asp Thr Lys Asn Phe Tyr Gly Gly Arg Ala
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Leu Lys Lys Asp Thr Lys Met Lys Pro Cys Tyr Gly Ser Phe Ala Arg
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Val Gln Ser Phe Asp Ile Asp Leu Ala Phe Phe Asp Ile Pro Ser Thr

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Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val	Pro	Phe	His	Ile		
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Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	Lys	Asp	Val	Asn	Met	Ile		
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			580					585					590				
Ser	Phe	Thr	Ser	Ile	Asn	Leu	Tyr	Ala	Thr	Phe	Phe	Pro	Met	Ala	His		
	595					600						605					
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Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile		
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Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	
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Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	
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Ala	Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	
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Ala	Leu	Asp	Met	Asn	Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Ser	Thr	Leu	
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Leu	Tyr	Val	Val	Phe	Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	
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<211> 942

<212> PRT

<213> Chimpanzee Adenovirus- CV32 Pan6 Hexon

<400> 120

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Lys	Asp	Val	Asn	Met	Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg		
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Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu		
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Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala		
625					630					635					640		
Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser		
				645					650					655			
Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ser	Phe	Thr	Arg		
		660						665					670				
Leu	Lys	Thr	Arg	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	Pro	Tyr		
		675					680					685					
Phe	Val	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	Tyr	Leu		
	690					695					700						
Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Ile	Thr	Phe	Asp	Ser	Ser	Val	Ser		
705					710					715					720		
Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	Ile	Lys		
				725					730					735			
Arg	Thr	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr		
			740					745					750				
Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	His	Tyr	Asn	Ile	Gly	Tyr		
		755					760					765					
Gln	Gly	Phe	Tyr	Val	Pro	Glu	Gly	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe		
	770					775					780						
Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Val	Asn		
785					790					795					800		
Tyr	Lys	Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn	Asn	Ser		
				805					810					815			
Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Pro	Tyr		
			820					825					830				
Pro	Ala	Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Ser	Ala	Val	Ala	Ser		
		835					840					845					
Val	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Val	Met	Trp	Arg	Ile	Pro		
	850					855					860						
Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln		

865					870					875				880	
Asn	Met	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Asn	Phe	Glu
				885					890					895	
Val	Asp	Pro	Met	Asp	Glu	Ser	Thr	Leu	Leu	Tyr	Val	Val	Phe	Glu	Val
			900					905					910		
Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala
		915					920					925			
Val	Tyr	Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr		
	930					935					940				

<210> 121

<211> 932

<212> PRT

<213> Chimpanzee Adenovirus- CV33 Pan7 Hexon

<400> 121

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala
1				5				10						15	
Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
		20						25					30		
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50					55					60				
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr
65				70					75					80	
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85				90						95	
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser
		100						105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Thr	Cys	Gln	Trp	Thr	Tyr	Lys	Ala	Gly	Asp	Thr	Asp	Thr
	130					135					140				
Glu	Lys	Thr	Tyr	Thr	Tyr	Gly	Asn	Ala	Pro	Val	Gln	Gly	Ile	Ser	Ile
145					150					155				160	
Thr	Lys	Asp	Gly	Ile	Gln	Leu	Gly	Thr	Asp	Ser	Asp	Gly	Gln	Ala	Ile
				165					170					175	
Tyr	Ala	Asp	Glu	Thr	Tyr	Gln	Pro	Glu	Pro	Gln	Val	Gly	Asp	Ala	Glu
		180						185					190		
Trp	His	Asp	Ile	Thr	Gly	Thr	Asp	Glu	Lys	Tyr	Gly	Gly	Arg	Ala	Leu
		195					200					205			
Lys	Pro	Asp	Thr	Lys	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe	Ala	Lys	Pro
	210					215					220				
Thr	Asn	Lys	Glu	Gly	Gly	Gln	Ala	Asn	Val	Lys	Thr	Glu	Thr	Gly	Gly
225					230					235				240	
Thr	Lys	Glu	Tyr	Asp	Ile	Asp	Met	Ala	Phe	Phe	Asp	Asn	Arg	Ser	Ala
				245					250					255	
Ala	Ala	Ala	Gly	Leu	Ala	Pro	Glu	Ile	Val	Leu	Tyr	Thr	Glu	Asn	Val
		260						265					270		
Asp	Leu	Glu	Thr	Pro	Asp	Thr	His	Ile	Val	Tyr	Lys	Ala	Gly	Thr	Asp
		275					280					285			
Asp	Ser	Ser	Ser	Ser	Ile	Asn	Leu	Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg
	290					295					300				

Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp	Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	
305					310					315					320	
Asn	Ser	Thr	Gly	Asn	Met	Gly	Val	Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	
				325					330					335		
Asn	Ala	Val	Val	Asp	Leu	Gln	Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	
				340				345					350			
Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp	Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	
		355					360					365				
Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	
	370					375					380					
His	Gly	Val	Glu	Asp	Glu	Leu	Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Asp	Ala	
385					390					395					400	
Val	Gly	Arg	Thr	Asp	Thr	Tyr	Gln	Gly	Ile	Lys	Ala	Asn	Gly	Asp	Asn	
				405				410					415			
Gln	Thr	Thr	Trp	Thr	Lys	Asp	Asp	Thr	Val	Asn	Asp	Ala	Asn	Glu	Leu	
			420					425					430			
Gly	Lys	Gly	Asn	Pro	Phe	Ala	Met	Glu	Ile	Asn	Ile	Gln	Ala	Asn	Leu	
		435					440					445				
Trp	Arg	Asn	Phe	Leu	Tyr	Ala	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Ser	
	450					455				460						
Tyr	Lys	Tyr	Thr	Pro	Ala	Asn	Ile	Thr	Leu	Pro	Thr	Asn	Thr	Asn	Thr	
465					470					475					480	
Tyr	Asp	Tyr	Met	Asn	Gly	Arg	Val	Val	Ala	Pro	Ser	Leu	Val	Asp	Ala	
				485					490					495		
Tyr	Ile	Asn	Ile	Gly	Ala	Arg	Trp	Ser	Leu	Asp	Pro	Met	Asp	Asn	Val	
		500						505				510				
Asn	Pro	Phe	Asn	His	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	
		515					520					525				
Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val	Pro	Phe	His	Ile	Gln	Val	Pro	Gln	
	530					535					540					
Lys	Phe	Phe	Ala	Ile	Lys	Ser	Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	
545					550					555					560	
Tyr	Glu	Trp	Asn	Phe	Arg	Lys	Asp	Val	Asn	Met	Ile	Leu	Gln	Ser	Ser	
				565					570					575		
Leu	Gly	Asn	Asp	Leu	Arg	Thr	Asp	Gly	Ala	Ser	Ile	Ala	Phe	Thr	Ser	
			580					585					590			
Ile	Asn	Leu	Tyr	Ala	Thr	Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	
		595					600					605				
Thr	Leu	Glu	Ala	Met	Leu	Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	
	610					615						620				
Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	
625					630					635					640	
Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	
				645					650					655		
Gly	Trp	Ser	Phe	Thr	Arg	Leu	Lys	Thr	Arg	Glu	Thr	Pro	Ser	Leu	Gly	
			660					665					670			
Ser	Gly	Phe	Asp	Pro	Tyr	Phe	Val	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	
		675					680					685				
Asp	Gly	Thr	Phe	Tyr	Leu	Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Ile	Thr	
	690					695					700					
Phe	Asp	Ser	Ser	Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	
705					710					715					720	
Asn	Glu	Phe	Glu	Ile	Lys	Arg	Thr	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	
				725					730					735		
Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	

			740					745					750				
His	Tyr	Asn	Ile	Gly	Tyr	Gln	Gly	Phe	Tyr	Val	Pro	Glu	Gly	Tyr	Lys		
		755					760					765					
Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln		
		770				775					780						
Val	Val	Asp	Glu	Val	Asn	Tyr	Lys	Asp	Tyr	Gln	Ala	Val	Thr	Leu	Ala		
785					790					795					800		
Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met		
			805						810					815			
Arg	Gln	Gly	Gln	Pro	Tyr	Pro	Ala	Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly		
			820					825					830				
Lys	Ser	Ala	Val	Ala	Ser	Val	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg		
		835					840					845					
Val	Met	Trp	Arg	Ile	Pro	Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala		
	850					855					860						
Leu	Thr	Asp	Leu	Gly	Gln	Asn	Met	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala		
865				870					875						880		
Leu	Asp	Met	Asn	Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Ser	Thr	Leu	Leu		
			885					890						895			
Tyr	Val	Val	Phe	Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His		
		900					905					910					
Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr	Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly		
		915					920					925					
Asn	Ala	Thr	Thr														
		930															

<210> 122

<211> 960

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 3 Hexon

<400> 122

Met	Ala	Thr	Pro	Ser	Met	Met	Pro	Gln	Trp	Ser	Tyr	Met	His	Ile	Ser		
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Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala		
		20						25					30				
Arg	Ala	Thr	Glu	Ser	Tyr	Phe	Ser	Leu	Ser	Asn	Lys	Phe	Arg	Asn	Pro		
		35					40					45					
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu		
	50					55				60							
Thr	Leu	Arg	Phe	Ile	Pro	Val	Asp	Arg	Glu	Asp	Thr	Ala	Tyr	Ser	Tyr		
65				70					75						80		
Lys	Ala	Arg	Phe	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met		
			85					90						95			
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Thr		
		100						105					110				
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly		
		115					120						125				
Ala	Pro	Asn	Ser	Cys	Glu	Trp	Glu	Gln	Glu	Glu	Thr	Gln	Ala	Val	Glu		
		130				135					140						
Glu	Ala	Ala	Glu	Glu	Glu	Glu	Glu	Asp	Ala	Asp	Gly	Gln	Ala	Glu	Glu		
145					150					155					160		
Glu	Gln	Ala	Ala	Thr	Lys	Lys	Thr	His	Val	Tyr	Ala	Gln	Ala	Pro	Leu		
			165						170					175			

Ser	Gly	Glu	Lys	Ile	Ser	Lys	Asp	Gly	Leu	Gln	Ile	Gly	Thr	Asp	Ala	
			180					185					190			
Thr	Ala	Thr	Glu	Gln	Lys	Pro	Ile	Tyr	Ala	Asp	Pro	Thr	Phe	Gln	Pro	
		195					200					205				
Glu	Pro	Gln	Ile	Gly	Glu	Ser	Gln	Trp	Asn	Glu	Ala	Asp	Ala	Thr	Val	
	210					215					220					
Ala	Gly	Gly	Arg	Val	Leu	Lys	Lys	Ser	Thr	Pro	Met	Lys	Pro	Cys	Tyr	
225					230					235					240	
Gly	Ser	Tyr	Ala	Arg	Pro	Thr	Asn	Ala	Asn	Gly	Gly	Gln	Gly	Val	Leu	
			245					250						255		
Thr	Ala	Asn	Ala	Gln	Gly	Gln	Leu	Glu	Ser	Gln	Val	Glu	Met	Gln	Phe	
		260						265					270			
Phe	Ser	Thr	Ser	Glu	Asn	Ala	Arg	Asn	Glu	Ala	Asn	Asn	Ile	Gln	Pro	
	275						280					285				
Lys	Leu	Val	Leu	Tyr	Ser	Glu	Asp	Val	His	Met	Glu	Thr	Pro	Asp	Thr	
	290					295					300					
His	Leu	Ser	Tyr	Lys	Pro	Ala	Lys	Ser	Asp	Asp	Asn	Ser	Lys	Ile	Met	
305					310					315					320	
Leu	Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	
			325						330					335		
Asp	Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	
		340						345					350			
Val	Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu	Gln	
	355						360					365				
Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Leu	Leu	Asp	Ser	Met	Gly	
	370					375				380						
Asp	Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser	Tyr	
385					390					395					400	
Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Thr	Glu	Asp	Glu	Leu	
			405						410					415		
Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Gly	Gly	Ile	Gly	Val	Thr	Asp	Thr	Tyr	
		420						425					430			
Gln	Ala	Val	Lys	Thr	Asn	Asn	Gly	Asn	Asn	Gly	Gly	Gln	Val	Thr	Trp	
	435						440					445				
Thr	Lys	Asp	Glu	Thr	Phe	Ala	Asp	Arg	Asn	Glu	Ile	Gly	Val	Gly	Asn	
	450					455				460						
Asn	Phe	Ala	Met	Glu	Ile	Asn	Leu	Ser	Ala	Asn	Leu	Trp	Arg	Asn	Phe	
465					470					475					480	
Leu	Tyr	Ser	Asn	Val	Ala	Leu	Tyr	Leu	Pro	Asp	Lys	Leu	Lys	Tyr	Asn	
			485						490					495		
Pro	Ser	Asn	Val	Asp	Ile	Ser	Asp	Asn	Pro	Asn	Thr	Tyr	Asp	Tyr	Met	
		500						505					510			
Asn	Lys	Arg	Val	Val	Ala	Pro	Gly	Leu	Val	Asp	Cys	Tyr	Ile	Asn	Leu	
	515						520					525				
Gly	Ala	Arg	Trp	Ser	Leu	Asp	Tyr	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	
	530					535					540					
His	His	Arg	Asn	Ala	Gly	Leu	Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	
545					550					555					560	
Gly	Arg	Tyr	Val	Pro	Phe	His	Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	
			565						570					575		
Ile	Lys	Asn	Leu	Leu	Leu	Leu	Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	
	580							585					590			
Phe	Arg	Lys	Asp	Val	Asn	Met	Val	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	
	595						600					605				
Leu	Arg	Val	Asp	Gly	Ala	Ser	Ile	Lys	Phe	Glu	Ser	Ile	Cys	Leu	Tyr	

610						615						620					
Ala	Thr	Phe	Phe	Pro	Met	Ala	His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala		
625						630				635					640		
Met	Leu	Arg	Asn	Asp	Thr	Asn	Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser		
				645					650					655			
Ala	Ala	Asn	Met	Leu	Tyr	Pro	Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro		
			660					665					670				
Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ala	Phe		
		675				680						685					
Thr	Arg	Leu	Lys	Thr	Lys	Glu	Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp		
		690				695					700						
Pro	Tyr	Tyr	Thr	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe		
705					710					715					720		
Tyr	Leu	Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Val	Thr	Phe	Asp	Ser	Ser		
				725					730					735			
Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu		
			740					745					750				
Ile	Lys	Arg	Ser	Val	Asp	Gly	Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn		
		755				760						765					
Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu	Ala	Asn	Tyr	Asn	Ile		
	770				775					780							
Gly	Tyr	Gln	Gly	Phe	Tyr	Ile	Pro	Glu	Ser	Tyr	Lys	Asp	Arg	Met	Tyr		
785					790					795				800			
Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Gln		
				805				810						815			
Thr	Lys	Tyr	Lys	Asp	Tyr	Gln	Glu	Val	Gly	Ile	Ile	His	Gln	His	Asn		
			820			825							830				
Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr	Met	Arg	Glu	Gly	Gln		
		835				840						845					
Ala	Tyr	Pro	Ala	Asn	Phe	Pro	Tyr	Pro	Leu	Ile	Gly	Lys	Thr	Ala	Val		
	850					855					860						
Asp	Ser	Ile	Thr	Gln	Lys	Phe	Leu	Cys	Asp	Arg	Thr	Leu	Trp	Arg			
865					870				875					880			
Ile	Pro	Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Ser	Asp	Leu		
				885				890						895			
Gly	Gln	Asn	Leu	Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr		
		900				905							910				
Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Val	Leu	Phe		
		915				920						925					
Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile		
	930					935					940						
Glu	Thr	Val	Tyr	Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr		
945					950					955					960		

<210> 123

<211> 937

<212> PRT

<213> Chimpanzee Adenovirus- ChAd 6 Hexon

<400> 123

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala
1				5				10						15	
Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
			20					25					30		

Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro		
	35						40					45					
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu		
	50					55					60						
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr		
	65					70				75					80		
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met		
				85					90					95			
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser		
			100					105					110				
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly		
		115					120					125					
Ala	Pro	Asn	Thr	Ser	Gln	Trp	Ile	Thr	Lys	Asp	Asn	Gly	Thr	Asp	Lys		
		130				135					140						
Thr	Tyr	Ser	Phe	Gly	Asn	Ala	Pro	Val	Arg	Gly	Leu	Asp	Ile	Thr	Glu		
	145				150					155					160		
Glu	Gly	Leu	Gln	Ile	Gly	Pro	Asp	Glu	Ser	Gly	Gly	Glu	Ser	Lys	Lys		
			165					170						175			
Ile	Phe	Ala	Asp	Lys	Thr	Tyr	Gln	Pro	Glu	Pro	Gln	Leu	Gly	Asp	Glu		
			180					185					190				
Glu	Trp	His	Asp	Thr	Ile	Gly	Ala	Glu	Asp	Lys	Tyr	Gly	Gly	Arg	Ala		
		195					200				205						
Leu	Lys	Pro	Ala	Thr	Asn	Met	Lys	Pro	Cys	Tyr	Gly	Ser	Phe	Ala	Lys		
	210					215					220						
Pro	Thr	Asn	Ala	Lys	Gly	Gly	Gln	Ala	Lys	Ser	Arg	Thr	Lys	Asp	Asp		
	225				230					235					240		
Gly	Thr	Thr	Glu	Pro	Asp	Ile	Asp	Met	Ala	Phe	Phe	Asp	Asp	Arg	Ser		
				245					250					255			
Gln	Gln	Ala	Ser	Phe	Ser	Pro	Glu	Leu	Val	Leu	Tyr	Thr	Glu	Asn	Val		
		260						265					270				
Asp	Leu	Asp	Thr	Pro	Asp	Thr	His	Ile	Ile	Tyr	Lys	Pro	Gly	Thr	Asp		
	275						280					285					
Glu	Thr	Ser	Ser	Ser	Phe	Asn	Leu	Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg		
	290					295					300						
Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp	Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr		
	305				310					315					320		
Asn	Ser	Thr	Gly	Asn	Met	Gly	Val	Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu		
				325					330					335			
Asn	Ala	Val	Val	Asp	Leu	Gln	Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln		
		340						345					350				
Leu	Leu	Leu	Asp	Ser	Leu	Gly	Asp	Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp		
		355					360					365					
Asn	Gln	Ala	Val	Asp	Ser	Tyr	Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn		
	370					375					380						
His	Gly	Val	Glu	Asp	Glu	Leu	Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Asn	Gly		
	385				390					395				400			
Val	Gly	Phe	Thr	Asp	Thr	Phe	Gln	Gly	Ile	Lys	Val	Lys	Thr	Thr	Asn		
				405					410					415			
Asn	Gly	Thr	Ala	Asn	Ala	Thr	Glu	Trp	Glu	Ser	Asp	Thr	Ser	Val	Asn		
			420					425					430				
Asn	Ala	Asn	Glu	Ile	Ala	Lys	Gly	Asn	Pro	Phe	Ala	Met	Glu	Ile	Asn		
		435					440					445					
Ile	Gln	Ala	Asn	Leu	Trp	Arg	Asn	Phe	Leu	Tyr	Ala	Asn	Val	Ala	Leu		
	450					455					460						
Tyr	Leu	Pro	Asp	Ser	Tyr	Lys	Tyr	Thr	Pro	Ala	Asn	Ile	Thr	Leu	Pro		

465					470					475					480
Ala	Asn	Thr	Asn	Thr	Tyr	Asp	Tyr	Met	Asn	Gly	Arg	Val	Val	Ala	Pro
				485					490					495	
Ser	Leu	Val	Asp	Ala	Tyr	Ile	Asn	Ile	Gly	Ala	Arg	Trp	Ser	Leu	Asp
			500					505					510		
Pro	Met	Asp	Asn	Val	Asn	Pro	Phe	Asn	His	His	Arg	Asn	Ala	Gly	Leu
		515					520					525			
Arg	Tyr	Arg	Ser	Met	Leu	Leu	Gly	Asn	Gly	Arg	Tyr	Val	Pro	Phe	His
	530					535				540					
Ile	Gln	Val	Pro	Gln	Lys	Phe	Phe	Ala	Ile	Lys	Ser	Leu	Leu	Leu	Leu
545					550					555					560
Pro	Gly	Ser	Tyr	Thr	Tyr	Glu	Trp	Asn	Phe	Arg	Lys	Asp	Val	Asn	Met
				565					570					575	
Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg	Thr	Asp	Gly	Ala	Ser
			580				585						590		
Ile	Ala	Phe	Thr	Ser	Ile	Asn	Leu	Tyr	Ala	Thr	Phe	Phe	Pro	Met	Ala
	595						600				605				
His	Asn	Thr	Ala	Ser	Thr	Leu	Glu	Ala	Met	Leu	Arg	Asn	Asp	Thr	Asn
	610					615					620				
Asp	Gln	Ser	Phe	Asn	Asp	Tyr	Leu	Ser	Ala	Ala	Asn	Met	Leu	Tyr	Pro
625					630					635					640
Ile	Pro	Ala	Asn	Ala	Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro	Ser	Arg	Asn
			645						650					655	
Trp	Ala	Ala	Phe	Arg	Gly	Trp	Ser	Phe	Thr	Arg	Leu	Lys	Thr	Arg	Glu
		660						665					670		
Thr	Pro	Ser	Leu	Gly	Ser	Gly	Phe	Asp	Pro	Tyr	Phe	Val	Tyr	Ser	Gly
	675					680					685				
Ser	Ile	Pro	Tyr	Leu	Asp	Gly	Thr	Phe	Tyr	Leu	Asn	His	Thr	Phe	Lys
	690				695						700				
Lys	Val	Ser	Ile	Thr	Phe	Asp	Ser	Ser	Val	Ser	Trp	Pro	Gly	Asn	Asp
705					710					715					720
Arg	Leu	Leu	Thr	Pro	Asn	Glu	Phe	Glu	Ile	Lys	Arg	Thr	Val	Asp	Gly
			725						730					735	
Glu	Gly	Tyr	Asn	Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	Trp	Phe	Leu
		740						745					750		
Val	Gln	Met	Leu	Ala	His	Tyr	Asn	Ile	Gly	Tyr	Gln	Gly	Phe	Tyr	Val
	755					760					765				
Pro	Glu	Gly	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg	Asn	Phe	Gln
	770				775						780				
Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Val	Asn	Tyr	Lys	Asp	Tyr	Gln
785					790					795					800
Ala	Val	Thr	Leu	Ala	Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe	Val	Gly	Tyr
			805					810						815	
Leu	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Pro	Tyr	Pro	Ala	Asn	Tyr	Pro
		820					825						830		
Tyr	Pro	Leu	Ile	Gly	Lys	Ser	Ala	Val	Ala	Ser	Val	Thr	Gln	Lys	Lys
	835					840					845				
Phe	Leu	Cys	Asp	Arg	Val	Met	Trp	Arg	Ile	Pro	Phe	Ser	Ser	Asn	Phe
	850				855					860					
Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln	Asn	Met	Leu	Tyr	Ala
865					870				875						880
Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Asn	Phe	Glu	Val	Asp	Pro	Met	Asp
			885					890						895	
Glu	Ser	Thr	Leu	Leu	Tyr	Val	Val	Phe	Glu	Val	Phe	Asp	Val	Val	Arg
			900				905						910		

Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr	Leu	Arg	Thr
		915					920					925			
Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr							
		930				935									

<210> 124

<211> 956

<212> PRT

<213> Chimpanzee Adenovirus- C1 Hexon

<400> 124

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala
1				5					10					15	
Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
			20					25					30		
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Asn	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50				55						60				
Met	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr
65					70					75					80
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85					90					95	
Ala	Ser	Thr	Phe	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser
			100					105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Ser	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Thr	Ser	Gln	Trp	Leu	Asp	Lys	Gly	Val	Thr	Thr	Thr	Asp
	130					135					140				
Asn	Asn	Thr	Glu	Asn	Gly	Asp	Glu	Glu	Asp	Glu	Val	Ala	Glu	Glu	Gly
145					150					155					160
Glu	Glu	Glu	Lys	Gln	Ala	Thr	Tyr	Thr	Phe	Gly	Asn	Ala	Pro	Val	Lys
				165					170					175	
Ala	Glu	Ala	Glu	Ile	Thr	Lys	Glu	Gly	Leu	Pro	Ile	Gly	Leu	Glu	Val
			180					185					190		
Pro	Ser	Glu	Gly	Asp	Pro	Lys	Pro	Ile	Tyr	Ala	Asp	Lys	Leu	Tyr	Gln
		195				200						205			
Pro	Glu	Pro	Gln	Val	Gly	Glu	Glu	Ser	Trp	Thr	Asp	Thr	Asp	Gly	Thr
	210					215						220			
Asp	Glu	Lys	Tyr	Gly	Gly	Arg	Ala	Leu	Lys	Pro	Glu	Thr	Lys	Met	Lys
225					230					235					240
Pro	Cys	Tyr	Gly	Ser	Phe	Ala	Lys	Pro	Thr	Asn	Val	Lys	Gly	Gly	Gln
				245					250					255	
Ala	Lys	Val	Lys	Lys	Val	Glu	Glu	Gly	Lys	Val	Glu	Tyr	Asp	Ile	Asp
			260					265					270		
Met	Asn	Phe	Phe	Asp	Leu	Arg	Ser	Gln	Lys	Thr	Gly	Leu	Lys	Pro	Lys
		275					280					285			
Ile	Val	Met	Tyr	Ala	Glu	Asn	Val	Asp	Leu	Glu	Thr	Pro	Asp	Thr	His
	290					295					300				
Val	Val	Tyr	Lys	Pro	Gly	Ala	Ser	Asp	Ala	Ser	Ser	His	Ala	Asn	Leu
305					310				315						320
Gly	Gln	Gln	Ser	Met	Pro	Asn	Arg	Pro	Asn	Tyr	Ile	Gly	Phe	Arg	Asp
				325					330					335	
Asn	Phe	Ile	Gly	Leu	Met	Tyr	Tyr	Asn	Ser	Thr	Gly	Asn	Met	Gly	Val

Phe	Tyr	Val	Pro	Glu	Gly	Tyr	Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg
785					790					795					800
Asn	Phe	Gln	Pro	Met	Ser	Arg	Gln	Val	Val	Asp	Glu	Ile	Asn	Tyr	Lys
				805					810					815	
Asp	Tyr	Lys	Ala	Val	Ala	Val	Pro	Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe
			820					825					830		
Val	Gly	Tyr	Met	Ala	Pro	Thr	Met	Arg	Gln	Gly	Gln	Ala	Tyr	Pro	Ala
		835					840					845			
Asn	Tyr	Pro	Tyr	Pro	Leu	Ile	Gly	Thr	Thr	Ala	Val	Thr	Ser	Val	Thr
	850					855					860				
Gln	Lys	Lys	Phe	Leu	Cys	Asp	Arg	Thr	Met	Trp	Arg	Ile	Pro	Phe	Ser
865					870					875					880
Ser	Asn	Phe	Met	Ser	Met	Gly	Ala	Leu	Thr	Asp	Leu	Gly	Gln	Asn	Leu
				885					890					895	
Leu	Tyr	Ala	Asn	Ser	Ala	His	Ala	Leu	Asp	Met	Thr	Phe	Glu	Val	Asp
			900					905					910		
Pro	Met	Asp	Glu	Pro	Thr	Leu	Leu	Tyr	Leu	Leu	Phe	Glu	Val	Phe	Asp
		915					920					925			
Val	Val	Arg	Val	His	Gln	Pro	His	Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr
	930				935						940				
Leu	Arg	Thr	Pro	Phe	Ser	Ala	Gly	Asn	Ala	Thr	Thr				
945					950					955					

<210> 125

<211> 933

<212> PRT

<213> Chimpanzee Adenovirus- CV68 Hexon

<400> 125

Met	Ala	Thr	Pro	Ser	Met	Leu	Pro	Gln	Trp	Ala	Tyr	Met	His	Ile	Ala
1				5					10					15	
Gly	Gln	Asp	Ala	Ser	Glu	Tyr	Leu	Ser	Pro	Gly	Leu	Val	Gln	Phe	Ala
			20					25					30		
Arg	Ala	Thr	Asp	Thr	Tyr	Phe	Ser	Leu	Gly	Asn	Lys	Phe	Arg	Asn	Pro
		35					40					45			
Thr	Val	Ala	Pro	Thr	His	Asp	Val	Thr	Thr	Asp	Arg	Ser	Gln	Arg	Leu
	50				55						60				
Thr	Leu	Arg	Phe	Val	Pro	Val	Asp	Arg	Glu	Asp	Asn	Thr	Tyr	Ser	Tyr
65					70					75					80
Lys	Val	Arg	Tyr	Thr	Leu	Ala	Val	Gly	Asp	Asn	Arg	Val	Leu	Asp	Met
				85					90					95	
Ala	Ser	Thr	Tyr	Phe	Asp	Ile	Arg	Gly	Val	Leu	Asp	Arg	Gly	Pro	Ser
			100					105					110		
Phe	Lys	Pro	Tyr	Ser	Gly	Thr	Ala	Tyr	Asn	Ser	Leu	Ala	Pro	Lys	Gly
		115					120					125			
Ala	Pro	Asn	Thr	Cys	Gln	Trp	Thr	Tyr	Lys	Ala	Asp	Gly	Glu	Thr	Ala
	130					135					140				
Thr	Glu	Lys	Thr	Tyr	Thr	Tyr	Gly	Asn	Ala	Pro	Val	Gln	Gly	Ile	Asn
145					150					155					160
Ile	Thr	Lys	Asp	Gly	Ile	Gln	Leu	Gly	Thr	Asp	Thr	Asp	Asp	Gln	Pro
			165						170					175	
Ile	Tyr	Ala	Asp	Lys	Thr	Tyr	Gln	Pro	Glu	Pro	Gln	Val	Gly	Asp	Ala
			180					185					190		
Glu	Trp	His	Asp	Ile	Thr	Gly	Thr	Asp	Glu	Lys	Tyr	Gly	Gly	Arg	Ala

Ala	Thr	Asn	Val	Pro	Ile	Ser	Ile	Pro	Ser	Arg	Asn	Trp	Ala	Ala	Phe
				645					650					655	
Arg	Gly	Trp	Ser	Phe	Thr	Arg	Leu	Lys	Thr	Lys	Glu	Thr	Pro	Ser	Leu
			660					665					670		
Gly	Ser	Gly	Phe	Asp	Pro	Tyr	Phe	Val	Tyr	Ser	Gly	Ser	Ile	Pro	Tyr
		675					680					685			
Leu	Asp	Gly	Thr	Phe	Tyr	Leu	Asn	His	Thr	Phe	Lys	Lys	Val	Ser	Ile
	690					695					700				
Thr	Phe	Asp	Ser	Ser	Val	Ser	Trp	Pro	Gly	Asn	Asp	Arg	Leu	Leu	Thr
705					710					715					720
Pro	Asn	Glu	Phe	Glu	Ile	Lys	Arg	Thr	Val	Asp	Gly	Glu	Gly	Tyr	Asn
				725					730					735	
Val	Ala	Gln	Cys	Asn	Met	Thr	Lys	Asp	Trp	Phe	Leu	Val	Gln	Met	Leu
			740					745					750		
Ala	His	Tyr	Asn	Ile	Gly	Tyr	Gln	Gly	Phe	Tyr	Val	Pro	Glu	Gly	Tyr
		755					760					765			
Lys	Asp	Arg	Met	Tyr	Ser	Phe	Phe	Arg	Asn	Phe	Gln	Pro	Met	Ser	Arg
	770					775				780					
Gln	Val	Val	Asp	Glu	Val	Asn	Tyr	Lys	Asp	Tyr	Gln	Ala	Val	Thr	Leu
785					790					795					800
Ala	Tyr	Gln	His	Asn	Asn	Ser	Gly	Phe	Val	Gly	Tyr	Leu	Ala	Pro	Thr
				805				810						815	
Met	Arg	Gln	Gly	Gln	Pro	Tyr	Pro	Ala	Xaa	Tyr	Pro	Tyr	Pro	Leu	Ile
			820					825					830		
Gly	Lys	Ser	Ala	Val	Thr	Ser	Val	Thr	Gln	Lys	Lys	Phe	Leu	Cys	Asp
		835					840					845			
Arg	Val	Met	Trp	Arg	Ile	Pro	Phe	Ser	Ser	Asn	Phe	Met	Ser	Met	Gly
	850					855				860					
Ala	Leu	Thr	Asp	Leu	Gly	Gln	Asn	Met	Leu	Tyr	Ala	Asn	Ser	Ala	His
865					870					875					880
Ala	Leu	Asp	Met	Asn	Phe	Glu	Val	Asp	Pro	Met	Asp	Glu	Ser	Thr	Leu
				885					890					895	
Leu	Tyr	Val	Val	Phe	Glu	Val	Phe	Asp	Val	Val	Arg	Val	His	Gln	Pro
		900					905						910		
His	Arg	Gly	Val	Ile	Glu	Ala	Val	Tyr	Xaa	Arg	Thr	Pro	Phe	Ser	Ala
	915						920					925			
Gly	Asn	Ala	Thr	Thr											
	930														